



January 10, 2013

Kathryn Hernandez  
USEPA, Region VIII (8EPR-SR)  
1595 Wynkoop St  
Denver, CO 80202

**RE: Richardson Flat OU-2 Quarterly Status Report for October through December 2012.**

Dear Ms. Hernandez,

This Quarterly Status Report details site activities conducted at OU-2 of Richardson Flat (Site) for October through December 2012.

**Sampling Activities Conducted:**

No sampling was completed during this quarter.

**Other Activity:**

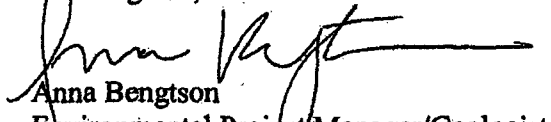
Continuation of work on the OU2 SAP and negotiation regarding OU2 project plans. Analysis of repository possibilities occurred.

**Planned Activities: January through March 2013**

Further review and progress on items noted above.

If you should have any questions or comments, please contact me at 435-333-6603.

Best Regards,

  
Anna Bengtson  
Environmental Project Manager/Geologist  
United Park City Mines Company

Cc: Kerry Gee, Kevin Murray, John Isanhart, Muhammad Slam



Kerry Gee  
United Park City Mines Co.  
PO Box 1450  
Park City, UT 84060  
TEL: (435) 608-0954

RE: Watershed

Dear Kerry Gee:

Lab Set ID: 1212046

463 West 3600 South  
Salt Lake City, UT 84115

American West Analytical Laboratories received 11 sample(s) on 12/4/2012 for the analyses presented in the following report.

Phone: (801) 263-8686  
Toll Free: (888) 263-8686  
Fax: (801) 263-8687  
e-mail: awal@awal-labs.com  
web: www.awal-labs.com

American West Analytical Laboratories (AWAL) is accredited by The National Environmental Laboratory Association Conference (NELAC) Institute in Utah and Texas; and is state accredited in Colorado, Idaho, New Mexico, and Missouri. In addition, AWAL is also accredited by the American Analytical Laboratory Association (A2LA) on ISO IEC 17025:2005, Department of Defense (DOD), UST for the State of Wyoming, and the National Lead Laboratory Accreditation Program (NLLAP). All analyses were performed in accordance to The NELAC Institute and/or A2LA protocols unless noted otherwise. Accreditation documents are available upon request. If you have any questions or concerns regarding this report please feel free to call.

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

The abbreviation "Surr" found in organic reports indicates a surrogate compound that is intentionally added by the laboratory to determine sample injection, extraction, and/or purging efficiency. The "Reporting Limit" found on the report is equivalent to the practical quantitation limit (PQL). This is the minimum concentration that can be reported by the method referenced and the sample matrix. The reporting limit must not be confused with any regulatory limit. Analytical results are reported to three significant figures for quality control and calculation purposes.

Thank You,

**Kyle F. Gross**  
Digitally signed by Kyle F. Gross  
DN: cn=Kyle F. Gross, o=AWAL,  
ou=AWAL-Laboratory Director,  
email=kyle@awal-labs.com, c=US  
Date: 2012.12.18 14:44:21 -0700

Approved by:

Laboratory Director or designee



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-001

**Client Sample ID:** OU2/3 - RF8 - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

### TOTAL METALS

463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

web: www.awal-labs.com

Compound	Units	Date Prepared		Date Analyzed		Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/5/2012	0910h	12/11/2012	1314h	E200.8	0.00200	0.00453	
Cadmium	mg/L	12/5/2012	0910h	12/11/2012	1314h	E200.8	0.000500	0.00218	
Calcium	mg/L	12/5/2012	0910h	12/6/2012	1636h	E200.7	100	155	2
Lead	mg/L	12/5/2012	0910h	12/11/2012	1314h	E200.8	0.00200	0.0339	
Magnesium	mg/L	12/5/2012	0910h	12/10/2012	1349h	E200.7	10.0	38.0	
Potassium	mg/L	12/5/2012	0910h	12/10/2012	1458h	E200.7	1.00	2.35	
Sodium	mg/L	12/5/2012	0910h	12/7/2012	0916h	E200.7	100	105	2
Zinc	mg/L	12/5/2012	0910h	12/12/2012	2351h	E200.8	0.00500	0.728	

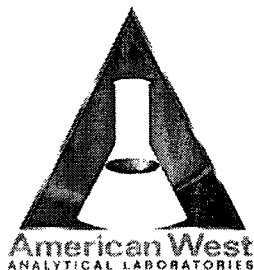
<sup>2</sup> - Analyte concentration is too high for accurate matrix spike recovery and/or RPD.

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-002

**Client Sample ID:** OU1 - MF - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

### TOTAL METALS

463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686  
Toll Free: (888) 263-8686  
Fax: (801) 263-8687  
e-mail: awal@awal-labs.com

web: www.awal-labs.com

Compound	Units	Date Prepared		Date Analyzed		Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/5/2012	0910h	12/11/2012	1349h	E200.8	0.00200	0.00320	
Cadmium	mg/L	12/5/2012	0910h	12/11/2012	1349h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	12/5/2012	0910h	12/6/2012	1652h	E200.7	100	324	
Lead	mg/L	12/5/2012	0910h	12/11/2012	1349h	E200.8	0.00200	< 0.00200	
Magnesium	mg/L	12/5/2012	0910h	12/10/2012	1401h	E200.7	10.0	76.8	
Potassium	mg/L	12/5/2012	0910h	12/10/2012	1509h	E200.7	1.00	3.34	
Sodium	mg/L	12/5/2012	0910h	12/7/2012	0929h	E200.7	100	101	
Zinc	mg/L	12/5/2012	0910h	12/13/2012	0013h	E200.8	0.00500	0.0786	

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer





## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-003

**Client Sample ID:** OU1 - Hwy Pond - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

### TOTAL METALS

Compound	Units	Date Prepared		Date Analyzed		Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/5/2012	0910h	12/11/2012	1356h	E200.8	0.00200	0.00367	
Cadmium	mg/L	12/5/2012	0910h	12/11/2012	1356h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	12/5/2012	0910h	12/6/2012	1656h	E200.7	100	272	
Lead	mg/L	12/5/2012	0910h	12/11/2012	1356h	E200.8	0.00200	< 0.00200	
Magnesium	mg/L	12/5/2012	0910h	12/10/2012	1405h	E200.7	10.0	74.2	
Potassium	mg/L	12/5/2012	0910h	12/10/2012	1513h	E200.7	1.00	7.87	
Sodium	mg/L	12/5/2012	0910h	12/7/2012	0934h	E200.7	100	201	
Zinc	mg/L	12/5/2012	0910h	12/13/2012	0020h	E200.8	0.00500	0.00630	

463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

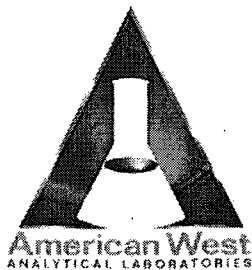
web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-004

**Client Sample ID:** OU3 - SFB - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

### TOTAL METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/5/2012 0910h	12/11/2012 1403h	E200.8	0.00200	0.00487	
Cadmium	mg/L	12/5/2012 0910h	12/11/2012 1403h	E200.8	0.000500	0.000945	
Calcium	mg/L	12/5/2012 0910h	12/6/2012 1700h	E200.7	100	130	
Lead	mg/L	12/5/2012 0910h	12/11/2012 1403h	E200.8	0.00200	0.0192	
Magnesium	mg/L	12/5/2012 0910h	12/10/2012 1002h	E200.7	10.0	35.7	
Potassium	mg/L	12/5/2012 0910h	12/10/2012 1517h	E200.7	1.00	1.93	
Sodium	mg/L	12/5/2012 0910h	12/10/2012 1002h	E200.7	10.0	97.5	
Zinc	mg/L	12/5/2012 0910h	12/13/2012 0027h	E200.8	0.00500	0.293	

463 West 3600 South

Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-005

**Client Sample ID:** OU3 - AFB Opp - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

### TOTAL METALS

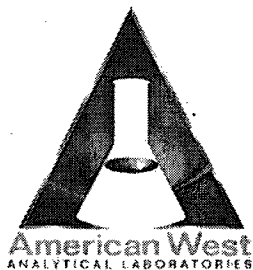
Compound	Units	Date Prepared		Date Analyzed		Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/5/2012	0910h	12/11/2012	1432h	E200.8	0.00200	0.00432	
Cadmium	mg/L	12/5/2012	0910h	12/11/2012	1432h	E200.8	0.000500	0.00132	
Calcium	mg/L	12/5/2012	0910h	12/6/2012	1716h	E200.7	100	112	
Lead	mg/L	12/5/2012	0910h	12/11/2012	1432h	E200.8	0.00200	0.0111	
Magnesium	mg/L	12/5/2012	0910h	12/10/2012	1409h	E200.7	10.0	26.7	
Potassium	mg/L	12/5/2012	0910h	12/10/2012	1521h	E200.7	1.00	2.35	
Sodium	mg/L	12/5/2012	0910h	12/10/2012	1006h	E200.7	100	186	
Zinc	mg/L	12/5/2012	0910h	12/13/2012	0034h	E200.8	0.00500	0.730	

463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686  
Toll Free: (888) 263-8686  
Fax: (801) 263-8687  
e-mail: awal@awal-labs.com  
web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-006

**Client Sample ID:** OU3 - RFR - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

### TOTAL METALS

463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686  
Toll Free: (888) 263-8686  
Fax: (801) 263-8687  
e-mail: awal@awal-labs.com

web: www.awal-labs.com

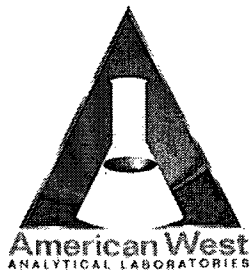
Compound	Units	Date Prepared		Date Analyzed		Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/5/2012	0910h	12/11/2012	1439h	E200.8	0.00200	0.00443	
Cadmium	mg/L	12/5/2012	0910h	12/11/2012	1439h	E200.8	0.000500	0.00105	
Calcium	mg/L	12/5/2012	0910h	12/6/2012	1720h	E200.7	100	126	
Lead	mg/L	12/5/2012	0910h	12/11/2012	1439h	E200.8	0.00200	0.0185	
Magnesium	mg/L	12/5/2012	0910h	12/10/2012	1413h	E200.7	10.0	32.9	
Potassium	mg/L	12/5/2012	0910h	12/10/2012	1525h	E200.7	1.00	2.13	
Sodium	mg/L	12/5/2012	0910h	12/10/2012	1010h	E200.7	100	111	
Zinc	mg/L	12/5/2012	0910h	12/13/2012	0041h	E200.8	0.00500	0.495	

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-007

**Client Sample ID:** PRO - Weir - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

### TOTAL METALS

Compound	Units	Date Prepared		Date Analyzed		Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/5/2012	0910h	12/11/2012	1446h	E200.8	0.00200	0.00353	
Cadmium	mg/L	12/5/2012	0910h	12/11/2012	1446h	E200.8	0.000500	0.00565	
Calcium	mg/L	12/5/2012	0910h	12/6/2012	1724h	E200.7	100	109	
Lead	mg/L	12/5/2012	0910h	12/11/2012	1446h	E200.8	0.00200	0.00896	
Magnesium	mg/L	12/5/2012	0910h	12/10/2012	1417h	E200.7	10.0	20.8	
Potassium	mg/L	12/5/2012	0910h	12/10/2012	1529h	E200.7	1.00	5.80	
Sodium	mg/L	12/5/2012	0910h	12/10/2012	1015h	E200.7	100	1,460	
Zinc	mg/L	12/5/2012	0910h	12/13/2012	0110h	E200.8	0.00500	0.627	

463 West 3600 South

Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-008

**Client Sample ID:** PRO - WL Pipe - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

### TOTAL METALS

463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

web: www.awal-labs.com

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/5/2012 0910h	12/11/2012 1453h	E200.8	0.00200	<0.00200	
Cadmium	mg/L	12/5/2012 0910h	12/11/2012 1453h	E200.8	0.000500	<0.000500	
Calcium	mg/L	12/5/2012 0910h	12/6/2012 1728h	E200.7	100	297	
Lead	mg/L	12/5/2012 0910h	12/11/2012 1453h	E200.8	0.00200	<0.00200	
Magnesium	mg/L	12/5/2012 0910h	12/10/2012 1421h	E200.7	10.0	34.8	
Potassium	mg/L	12/5/2012 0910h	12/10/2012 1533h	E200.7	1.00	5.77	
Sodium	mg/L	12/5/2012 0910h	12/10/2012 1019h	E200.7	100	205	
Zinc	mg/L	12/5/2012 0910h	12/13/2012 0117h	E200.8	0.00500	0.862	

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-009

**Client Sample ID:** OU3 - B Weir - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

### TOTAL METALS

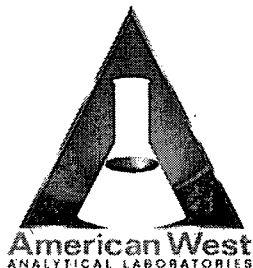
463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686  
Toll Free: (888) 263-8686  
Fax: (801) 263-8687  
e-mail: awal@awal-labs.com  
web: www.awal-labs.com

Compound	Units	Date Prepared		Date Analyzed		Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/5/2012	0910h	12/11/2012	1500h	E200.8	0.00200	0.00229	
Cadmium	mg/L	12/5/2012	0910h	12/11/2012	1500h	E200.8	0.000500	0.0137	
Calcium	mg/L	12/5/2012	0910h	12/6/2012	1732h	E200.7	100	183	
Lead	mg/L	12/5/2012	0910h	12/11/2012	1500h	E200.8	0.00200	0.00855	
Magnesium	mg/L	12/5/2012	0910h	12/10/2012	1425h	E200.7	10.0	28.5	
Potassium	mg/L	12/5/2012	0910h	12/11/2012	1111h	E200.7	1.00	6.69	
Sodium	mg/L	12/5/2012	0910h	12/10/2012	1023h	E200.7	100	1,200	
Zinc	mg/L	12/5/2012	0910h	12/13/2012	0124h	E200.8	0.0125	2.42	

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-010

**Client Sample ID:** PRO - 50 Weir - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

### TOTAL METALS

463 West 3600 South

Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

web: www.awal-labs.com

Compound	Units	Date Prepared		Date Analyzed		Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/5/2012	0910h	12/11/2012	1507h	E200.8	0.00200	0.00367	
Cadmium	mg/L	12/5/2012	0910h	12/11/2012	1507h	E200.8	0.000500	0.00572	
Calcium	mg/L	12/5/2012	0910h	12/6/2012	1736h	E200.7	100	108	
Lead	mg/L	12/5/2012	0910h	12/11/2012	1507h	E200.8	0.00200	0.00824	
Magnesium	mg/L	12/5/2012	0910h	12/10/2012	1441h	E200.7	10.0	19.9	
Potassium	mg/L	12/5/2012	0910h	12/11/2012	1115h	E200.7	1.00	5.99	
Sodium	mg/L	12/5/2012	0910h	12/10/2012	1027h	E200.7	100	1,420	
Zinc	mg/L	12/5/2012	0910h	12/13/2012	0131h	E200.8	0.00500	0.627	

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer





## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-011

**Client Sample ID:** PHAP - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

### TOTAL METALS

Compound	Units	Date Prepared		Date Analyzed		Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/5/2012	0910h	12/11/2012	1514h	E200.8	0.00200	0.00455	
Cadmium	mg/L	12/5/2012	0910h	12/11/2012	1514h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	12/5/2012	0910h	12/6/2012	1740h	E200.7	100	125	1
Lead	mg/L	12/5/2012	0910h	12/11/2012	1514h	E200.8	0.00200	0.00663	
Magnesium	mg/L	12/5/2012	0910h	12/7/2012	1019h	E200.7	10.0	36.3	
Potassium	mg/L	12/5/2012	0910h	12/11/2012	1119h	E200.7	1.00	1.87	
Sodium	mg/L	12/5/2012	0910h	12/10/2012	1031h	E200.7	10.0	44.9	
Zinc	mg/L	12/5/2012	0910h	12/13/2012	0138h	E200.8	0.00500	0.0503	

<sup>1</sup> - Analyte concentration is too high for accurate matrix spike recovery and/or RPD.

463 West 3600 South

Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-001

**Client Sample ID:** OU2/3 - RF8 - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

### DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/5/2012 0910h	12/13/2012 0256h	E200.8	0.00200	0.00233	
Cadmium	mg/L	12/5/2012 0910h	12/11/2012 1654h	E200.8	0.000500	0.00127	
Lead	mg/L	12/5/2012 0910h	12/11/2012 1654h	E200.8	0.00200	< 0.00200	
Zinc	mg/L	12/5/2012 0910h	12/13/2012 0256h	E200.8	0.00500	0.635	

463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

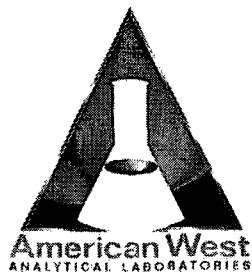
Fax: (801) 263-8687

e-mail: awal@awal-labs.com

web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-002

**Client Sample ID:** OU1 - MF - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

### DISSOLVED METALS

Compound	Units	Date Prepared		Date Analyzed		Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/5/2012	0910h	12/13/2012	0317h	E200.8	0.00200	<b>0.00208</b>	
Cadmium	mg/L	12/5/2012	0910h	12/11/2012	1730h	E200.8	0.000500	< 0.000500	
Lead	mg/L	12/5/2012	0910h	12/11/2012	1730h	E200.8	0.00200	< 0.00200	
Zinc	mg/L	12/5/2012	0910h	12/13/2012	0317h	E200.8	0.00500	<b>0.0626</b>	

463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-003

**Client Sample ID:** OU1 - Hwy Pond - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

### DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/5/2012 0910h	12/13/2012 0324h	E200.8	0.00200	0.00273	
Cadmium	mg/L	12/5/2012 0910h	12/11/2012 1737h	E200.8	0.000500	< 0.000500	
Lead	mg/L	12/5/2012 0910h	12/11/2012 1737h	E200.8	0.00200	< 0.00200	
Zinc	mg/L	12/5/2012 0910h	12/13/2012 0324h	E200.8	0.00500	0.00965	

463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686  
Toll Free: (888) 263-8686  
Fax: (801) 263-8687  
e-mail: awal@awal-labs.com

web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-004

**Client Sample ID:** OU3 - SFB - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

### DISSOLVED METALS

Compound	Units	Date Prepared		Date Analyzed		Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/5/2012	0910h	12/13/2012	0332h	E200.8	0.00200	<b>0.00384</b>	
Cadmium	mg/L	12/5/2012	0910h	12/11/2012	1744h	E200.8	0.000500	< 0.000500	
Lead	mg/L	12/5/2012	0910h	12/11/2012	1744h	E200.8	0.00200	< 0.00200	
Zinc	mg/L	12/5/2012	0910h	12/13/2012	0332h	E200.8	0.00500	<b>0.226</b>	

463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

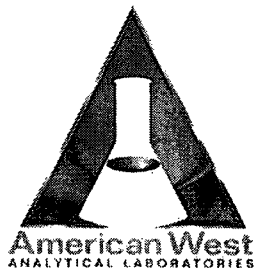
web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-005

**Client Sample ID:** OU3 - AFB Opp - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

### DISSOLVED METALS

Compound	Units	Date Prepared		Date Analyzed		Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/5/2012	0910h	12/13/2012	0339h	E200.8	0.00200	0.00260	
Cadmium	mg/L	12/5/2012	0910h	12/11/2012	1812h	E200.8	0.000500	< 0.000500	
Lead	mg/L	12/5/2012	0910h	12/11/2012	1812h	E200.8	0.00200	< 0.00200	
Zinc	mg/L	12/5/2012	0910h	12/13/2012	0339h	E200.8	0.00500	0.650	

463 West 3600 South

Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-006

**Client Sample ID:** OU3 - RFR - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

### DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/5/2012 0910h	12/13/2012 0346h	E200.8	0.00200	<b>0.00224</b>	
Cadmium	mg/L	12/5/2012 0910h	12/11/2012 1819h	E200.8	0.000500	< 0.000500	
Lead	mg/L	12/5/2012 0910h	12/11/2012 1819h	E200.8	0.00200	< 0.00200	
Zinc	mg/L	12/5/2012 0910h	12/13/2012 0346h	E200.8	0.00500	<b>0.412</b>	

463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-007

**Client Sample ID:** PRO - Weir - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

### DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/5/2012 0910h	12/13/2012 0414h	E200.8	0.00200	0.00223	
Cadmium	mg/L	12/5/2012 0910h	12/11/2012 1826h	E200.8	0.000500	0.00243	
Lead	mg/L	12/5/2012 0910h	12/11/2012 1826h	E200.8	0.00200	< 0.00200	
Zinc	mg/L	12/5/2012 0910h	12/13/2012 0414h	E200.8	0.00500	0.573	

463 West 3600 South

Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer





## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-008

**Client Sample ID:** PRO - WL Pipe - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

### DISSOLVED METALS

Compound	Units	Date Prepared		Date Analyzed		Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/5/2012	0910h	12/13/2012	0421h	E200.8	0.00200	< 0.00200	
Cadmium	mg/L	12/5/2012	0910h	12/11/2012	1833h	E200.8	0.000500	< 0.000500	
Lead	mg/L	12/5/2012	0910h	12/11/2012	1833h	E200.8	0.00200	< 0.00200	
Zinc	mg/L	12/5/2012	0910h	12/13/2012	0421h	E200.8	0.00500	<b>0.0236</b>	

463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

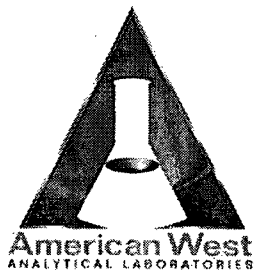
web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-009

**Client Sample ID:** OU3 - B Weir - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

### DISSOLVED METALS

Compound	Units	Date Prepared		Date Analyzed		Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/5/2012	0910h	12/13/2012	0428h	E200.8	0.00200	< 0.00200	
Cadmium	mg/L	12/5/2012	0910h	12/11/2012	1841h	E200.8	0.000500	0.00138	
Lead	mg/L	12/5/2012	0910h	12/11/2012	1841h	E200.8	0.00200	< 0.00200	
Zinc	mg/L	12/5/2012	0910h	12/13/2012	0435h	E200.8	0.0125	2.02	

463 West 3600 South

Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-010

**Client Sample ID:** PRO - 50 Weir - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

### DISSOLVED METALS

Compound	Units	Date Prepared		Date Analyzed		Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/5/2012	0910h	12/13/2012	0443h	E200.8	0.00200	0.00210	
Cadmium	mg/L	12/5/2012	0910h	12/11/2012	1848h	E200.8	0.000500	0.00231	
Lead	mg/L	12/5/2012	0910h	12/11/2012	1848h	E200.8	0.00200	< 0.00200	
Zinc	mg/L	12/5/2012	0910h	12/13/2012	0443h	E200.8	0.00500	0.587	

463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-011

**Client Sample ID:** PHAP - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

### DISSOLVED METALS

Compound	Units	Date Prepared		Date Analyzed		Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/5/2012	0910h	12/13/2012	0450h	E200.8	0.00200	0.00350	
Cadmium	mg/L	12/5/2012	0910h	12/11/2012	1855h	E200.8	0.000500	< 0.000500	
Lead	mg/L	12/5/2012	0910h	12/11/2012	1855h	E200.8	0.00200	< 0.00200	
Zinc	mg/L	12/5/2012	0910h	12/13/2012	0450h	E200.8	0.00500	0.0487	

463 West 3600 South

Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-001

**Client Sample ID:** OU2/3 - RF8 - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		12/5/2012 0800h	SM2320B	20.0	163	
Carbonate (as CaCO <sub>3</sub> )	mg/L		12/5/2012 0800h	SM2320B	20.0	< 20.0	
Chloride	mg/L		12/6/2012 1643h	SM4500-Cl-E	50.0	277	
Nitrate/Nitrite (as N)	mg/L		12/10/2012 2042h	E353.2	0.0100	0.260	~
Sulfate	mg/L		12/6/2012 0954h	SM4500-SO4-E	62.5	188	
Total Dissolved Solids	mg/L		12/7/2012 1310h	SM2540C	20.0	1,060	@

~ - The sample was received unpreserved and was therefore preserved in the laboratory.

' - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

@ - High RPD due to suspected sample non-homogeneity or matrix interference.

463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

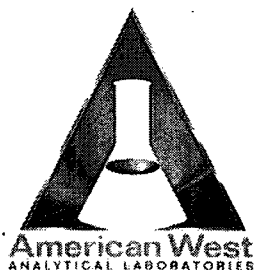
web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-002

**Client Sample ID:** OU1 - MF - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		12/5/2012 1000h	SM2320B	20.0	222	
Carbonate (as CaCO <sub>3</sub> )	mg/L		12/5/2012 1000h	SM2320B	20.0	< 20.0	
Chloride	mg/L		12/6/2012 1644h	SM4500-Cl-E	50.0	323	
Nitrate/Nitrite (as N)	mg/L		12/10/2012 2043h	E353.2	0.0100	< 0.0100	~
Sulfate	mg/L		12/6/2012 0954h	SM4500-SO <sub>4</sub> -E	125	835	
Total Dissolved Solids	mg/L		12/7/2012 1310h	SM2540C	20.0	1,640	

~ - The sample was received unpreserved and was therefore preserved in the laboratory.

! - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

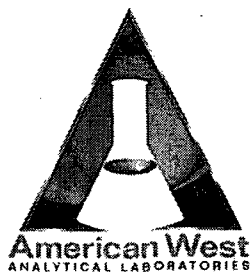
463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686  
Toll Free: (888) 263-8686  
Fax: (801) 263-8687  
e-mail: awal@awal-labs.com

web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-003

**Client Sample ID:** OU1 - Hwy Pond - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		12/5/2012 1000h	SM2320B	20.0	127	
Carbonate (as CaCO <sub>3</sub> )	mg/L		12/5/2012 1000h	SM2320B	20.0	< 20.0	
Chloride	mg/L		12/6/2012 1658h	SM4500-Cl-E	50.0	609	
Nitrate/Nitrite (as N)	mg/L		12/10/2012 2045h	E353.2	0.0100	< 0.0100	~
Sulfate	mg/L		12/6/2012 0954h	SM4500-SO4-E	125	491	
Total Dissolved Solids	mg/L		12/7/2012 1310h	SM2540C	20.0	1,840	

~ - The sample was received unpreserved and was therefore preserved in the laboratory.

463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686  
Toll Free: (888) 263-8686  
Fax: (801) 263-8687  
e-mail: awal@awal-labs.com

web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-004

**Client Sample ID:** OU3 - SFB - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

463 West 3600 South

Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

web: www.awal-labs.com

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		12/5/2012 1000h	SM2320B	20.0	174	
Carbonate (as CaCO <sub>3</sub> )	mg/L		12/5/2012 1000h	SM2320B	20.0	< 20.0	
Chloride	mg/L		12/6/2012 1646h	SM4500-Cl-E	50.0	233	
Nitrate/Nitrite (as N)	mg/L		12/10/2012 2046h	E353.2	0.0100	0.580	~
Sulfate	mg/L		12/6/2012 0954h	SM4500-SO <sub>4</sub> -E	25.0	224	
Total Dissolved Solids	mg/L		12/7/2012 1310h	SM2540C	20.0	868	

~ - The sample was received unpreserved and was therefore preserved in the laboratory.

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer





## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-005

**Client Sample ID:** OU3 - AFB Opp - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		12/5/2012 1000h	SM2320B	10.0	141	
Carbonate (as CaCO <sub>3</sub> )	mg/L		12/5/2012 1000h	SM2320B	10.0	< 10.0	
Chloride	mg/L		12/6/2012 1648h	SM4500-Cl-E	50.0	367	
Nitrate/Nitrite (as N)	mg/L		12/10/2012 2054h	E353.2	0.0100	0.352	~
Sulfate	mg/L		12/6/2012 0954h	SM4500-SO <sub>4</sub> -E	25.0	156	
Total Dissolved Solids	mg/L		12/7/2012 1310h	SM2540C	20.0	1,050	

~ - The sample was received unpreserved and was therefore preserved in the laboratory.

463 West 3600 South

Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

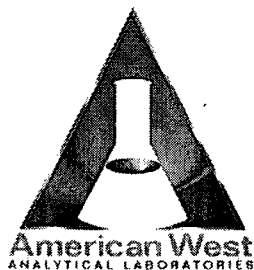
web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-006

**Client Sample ID:** OU3 - RFR - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

463 West 3600 South

Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

web: www.awal-labs.com

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		12/5/2012 1000h	SM2320B	10.0	159	
Carbonate (as CaCO <sub>3</sub> )	mg/L		12/5/2012 1000h	SM2320B	10.0	< 10.0	
Chloride	mg/L		12/6/2012 1649h	SM4500-Cl-E	50.0	284	
Nitrate/Nitrite (as N)	mg/L		12/10/2012 2055h	E353.2	0.0100	0.406	~
Sulfate	mg/L		12/6/2012 0954h	SM4500-SO <sub>4</sub> -E	25.0	224	
Total Dissolved Solids	mg/L		12/7/2012 1310h	SM2540C	20.0	836	

~ - The sample was received unpreserved and was therefore preserved in the laboratory.

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-007

**Client Sample ID:** PRO - Weir - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		12/5/2012 1000h	SM2320B	10.0	101	
Carbonate (as CaCO <sub>3</sub> )	mg/L		12/5/2012 1000h	SM2320B	10.0	< 10.0	
Chloride	mg/L		12/6/2012 1653h	SM4500-Cl-E	500	2,030	
Nitrate/Nitrite (as N)	mg/L		12/10/2012 2057h	E353.2	0.0100	0.243	~
Sulfate	mg/L		12/6/2012 0954h	SM4500-SO4-E	25.0	115	
Total Dissolved Solids	mg/L		12/7/2012 1310h	SM2540C	20.0	4,070	

~ - The sample was received unpreserved and was therefore preserved in the laboratory.

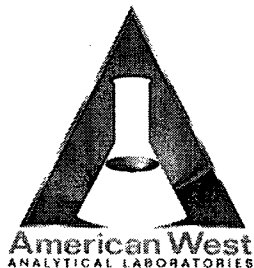
463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686  
Toll Free: (888) 263-8686  
Fax: (801) 263-8687  
e-mail: awal@awal-labs.com

web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-008

**Client Sample ID:** PRO - WL Pipe - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		12/5/2012 1000h	SM2320B	10.0	239	
Carbonate (as CaCO <sub>3</sub> )	mg/L		12/5/2012 1000h	SM2320B	10.0	< 10.0	
Chloride	mg/L		12/6/2012 1638h	SM4500-Cl-E	50.0	480	
Nitrate/Nitrite (as N)	mg/L		12/10/2012 2058h	E353.2	0.0100	0.0144	~
Sulfate	mg/L		12/6/2012 0954h	SM4500-SO <sub>4</sub> -E	125	462	
Total Dissolved Solids	mg/L		12/7/2012 1310h	SM2540C	20.0	1,710	

~ - The sample was received unpreserved and was therefore preserved in the laboratory.

463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686  
Toll Free: (888) 263-8686  
Fax: (801) 263-8687  
e-mail: awal@awal-labs.com

web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-009

**Client Sample ID:** OU3 - B Weir - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

463 West 3600 South

Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

web: www.awal-labs.com

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		12/5/2012 1000h	SM2320B	10.0	106	
Carbonate (as CaCO <sub>3</sub> )	mg/L		12/5/2012 1000h	SM2320B	10.0	< 10.0	
Chloride	mg/L		12/6/2012 1654h	SM4500-Cl-E	500	1,940	
Nitrate/Nitrite (as N)	mg/L		12/10/2012 2059h	E353.2	0.0100	0.667	~
Sulfate	mg/L		12/6/2012 0954h	SM4500-SO4-E	62.5	260	
Total Dissolved Solids	mg/L		12/7/2012 1310h	SM2540C	20.0	4,040	

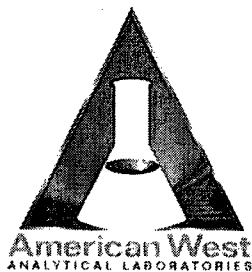
~ - The sample was received unpreserved and was therefore preserved in the laboratory.

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-010

**Client Sample ID:** PRO - 50 Weir - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		12/5/2012 1000h	SM2320B	10.0	99.3	
Carbonate (as CaCO <sub>3</sub> )	mg/L		12/5/2012 1000h	SM2320B	10.0	< 10.0	
Chloride	mg/L		12/6/2012 1656h	SM4500-Cl-E	500	2,110	
Nitrate/Nitrite (as N)	mg/L		12/10/2012 2101h	E353.2	0.0100	0.259	~
Sulfate	mg/L		12/6/2012 0954h	SM4500-SO <sub>4</sub> -E	25.0	115	
Total Dissolved Solids	mg/L		12/7/2012 1310h	SM2540C	20.0	4,020	

~ - The sample was received unpreserved and was therefore preserved in the laboratory.

463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686  
Toll Free: (888) 263-8686  
Fax: (801) 263-8687  
e-mail: awal@awal-labs.com

web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** United Park City Mines Co.

**Contact:** Kerry Gee

**Project:** Watershed

**Lab Sample ID:** 1212046-011

**Client Sample ID:** PHAP - SW

**Collection Date:** 12/4/2012

**Received Date:** 12/4/2012 1437h

### Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		12/5/2012 1000h	SM2320B	10.0	180	
Carbonate (as CaCO <sub>3</sub> )	mg/L		12/5/2012 1000h	SM2320B	10.0	< 10.0	
Chloride	mg/L		12/6/2012 1657h	SM4500-Cl-E	10.0	106	
Nitrate/Nitrite (as N)	mg/L		12/10/2012 2102h	E353.2	0.0100	0.620	~
Sulfate	mg/L		12/7/2012 0715h	SM4500-SO <sub>4</sub> -E	62.5	192	
Total Dissolved Solids	mg/L		12/7/2012 1310h	SM2540C	20.0	740	

~ - The sample was received unpreserved and was therefore preserved in the laboratory.

463 West 3600 South

Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

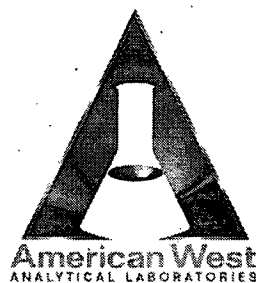
web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



463 West 3600 South

Salt Lake City, UT 84115

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687

e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** United Park City Mines Co.  
**Lab Set ID:** 1212046  
**Project:** Watershed

**Contact:** Kerry Gee  
**Dept:** ME  
**QC Type:** LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS-22520	Calcium	mg/L	E200.7	9.65	10.00	0	96.5	85-115				12/6/2012 1628h
LCS-22520	Magnesium	mg/L	E200.7	9.03	10.00	0	90.3	85-115				12/6/2012 1628h
LCS-22520	Potassium	mg/L	E200.7	8.95	10.00	0	89.5	85-115				12/6/2012 1628h
LCS-22520	Sodium	mg/L	E200.7	9.85	10.00	0	98.5	85-115				12/7/2012 0912h
LCS-22522	Cadmium	mg/L	E200.8	0.198	0.2000	0	99.1	85-115				12/11/2012 1647h
LCS-22522	Lead	mg/L	E200.8	0.189	0.2000	0	94.4	85-115				12/11/2012 1647h
LCS-22522	Arsenic	mg/L	E200.8	0.201	0.2000	0	100	85-115				12/13/2012 0249h
LCS-22522	Zinc	mg/L	E200.8	1.01	1.000	0	101	85-115				12/13/2012 0249h
LCS-22521	Arsenic	mg/L	E200.8	0.191	0.2000	0	95.4	85-115				12/11/2012 1307h
LCS-22521	Cadmium	mg/L	E200.8	0.194	0.2000	0	97.0	85-115				12/11/2012 1307h
LCS-22521	Lead	mg/L	E200.8	0.188	0.2000	0	94.2	85-115				12/11/2012 1307h
LCS-22521	Zinc	mg/L	E200.8	1.00	1.000	0	100	85-115				12/12/2012 2344h





463 West 3600 South

Salt Lake City, UT 84115

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687

e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

## QC SUMMARY REPORT

Client: United Park City Mines Co.

Lab Set ID: 1212046

Project: Watershed

Contact: Kerry Gee

Dept: ME

QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-22520	Calcium	mg/L	E200.7	< 1.00				-				12/6/2012 1624h
MB-22520	Magnesium	mg/L	E200.7	< 1.00				-				12/6/2012 1624h
MB-22520	Potassium	mg/L	E200.7	< 1.00				-				12/6/2012 1624h
MB-22520	Sodium	mg/L	E200.7	< 1.00				-				12/7/2012 0908h
MB-22522	Cadmium	mg/L	E200.8	< 0.000500				-				12/11/2012 1640h
MB-22522	Lead	mg/L	E200.8	< 0.00200				-				12/11/2012 1640h
MB-22522	Arsenic	mg/L	E200.8	< 0.00200				-				12/13/2012 0242h
MB-22522	Zinc	mg/L	E200.8	< 0.00500				-				12/13/2012 0242h
MB-22521	Arsenic	mg/L	E200.8	< 0.00200				-				12/11/2012 1259h
MB-22521	Cadmium	mg/L	E200.8	< 0.000500				-				12/11/2012 1259h
MB-22521	Lead	mg/L	E200.8	< 0.00200				-				12/11/2012 1259h
MB-22521	Zinc	mg/L	E200.8	< 0.00500				-				12/12/2012 2337h

Report Date: 12/18/2012 Page 36 of 44

All analyses applicable to the CWA, SDWA, and RCRA are performed in accordance to NELAC protocols. Pertinent sampling information is located on the attached COC. This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



463 West 3600 South

Salt Lake City, UT 84115

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687

e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

## QC SUMMARY REPORT

Client: United Park City Mines Co.

Lab Set ID: 1212046

Project: Watershed

Contact: Kerry Gee

Dept: ME

QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1212046-001BMS	Calcium	mg/L	E200.7	157	10.00	155.2	17.6	70-130			2	12/6/2012 1644h
1212046-001BMS	Sodium	mg/L	E200.7	123	10.00	104.7	184	70-130			2	12/7/2012 0920h
1212046-001BMS	Magnesium	mg/L	E200.7	45.1	10.00	38.03	71.1	70-130				12/10/2012 1353h
1212046-001BMS	Potassium	mg/L	E200.7	11.1	10.00	2.355	87.0	70-130				12/10/2012 1501h
1212046-011BMS	Calcium	mg/L	E200.7	137	10.00	125.2	117	70-130				12/6/2012 1744h
1212046-011BMS	Magnesium	mg/L	E200.7	45.8	10.00	36.31	95.3	70-130				12/7/2012 1023h
1212046-011BMS	Magnesium	mg/L	E200.7	48.6	10.00	38.37	102	70-130				12/10/2012 1035h
1212046-011BMS	Sodium	mg/L	E200.7	55.1	10.00	44.93	102	70-130				12/10/2012 1035h
1212046-011BMS	Potassium	mg/L	E200.7	11.7	10.00	1.872	98.4	70-130				12/11/2012 1123h
1212046-001EMS	Cadmium	mg/L	E200.8	0.199	0.2000	0.001268	98.8	75-125				12/11/2012 1715h
1212046-001EMS	Lead	mg/L	E200.8	0.189	0.2000	0.001546	93.8	75-125				12/11/2012 1715h
1212046-001EMS	Arsenic	mg/L	E200.8	0.198	0.2000	0.002327	97.9	75-125				12/13/2012 0303h
1212046-001EMS	Zinc	mg/L	E200.8	1.62	1.000	0.6348	98.1	75-125				12/13/2012 0303h
1212046-011EMS	Cadmium	mg/L	E200.8	0.193	0.2000	0.0001060	96.2	75-125				12/11/2012 1902h
1212046-011EMS	Lead	mg/L	E200.8	0.189	0.2000	0.0006490	94.0	75-125				12/11/2012 1902h
1212046-011EMS	Arsenic	mg/L	E200.8	0.207	0.2000	0.003498	102	75-125				12/13/2012 0457h
1212046-011EMS	Zinc	mg/L	E200.8	1.07	1.000	0.04872	102	75-125				12/13/2012 0457h
1212046-001BMS	Arsenic	mg/L	E200.8	0.196	0.2000	0.004532	95.9	75-125				12/11/2012 1335h
1212046-001BMS	Cadmium	mg/L	E200.8	0.193	0.2000	0.002180	95.3	75-125				12/11/2012 1335h
1212046-001BMS	Lead	mg/L	E200.8	0.217	0.2000	0.03387	91.6	75-125				12/11/2012 1335h
1212046-001BMS	Zinc	mg/L	E200.8	1.70	1.000	0.7285	97.2	75-125				12/12/2012 2359h
1212046-011BMS	Arsenic	mg/L	E200.8	0.197	0.2000	0.004552	96.2	75-125				12/11/2012 1521h
1212046-011BMS	Cadmium	mg/L	E200.8	0.190	0.2000	0.0002170	94.7	75-125				12/11/2012 1521h
1212046-011BMS	Lead	mg/L	E200.8	0.191	0.2000	0.006632	92.3	75-125				12/11/2012 1521h
1212046-011BMS	Zinc	mg/L	E200.8	1.06	1.000	0.05034	101	75-125				12/13/2012 0145h

<sup>2</sup> - Analyte concentration is too high for accurate matrix spike recovery and/or RPD.

Report Date: 12/18/2012 Page 37 of 44



463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687  
e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

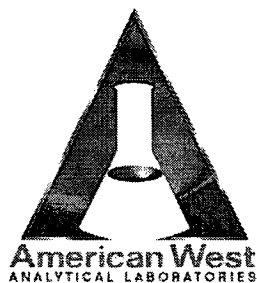
## QC SUMMARY REPORT

**Client:** United Park City Mines Co.  
**Lab Set ID:** 1212046  
**Project:** Watershed

**Contact:** Kerry Gee  
**Dept:** ME  
**QC Type:** MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1212046-001BMSD	Calcium	mg/L	E200.7	159	10.00	155.2	33.0	70-130	0.975	20	<sup>2</sup>	12/6/2012 1648h
1212046-001BMSD	Sodium	mg/L	E200.7	119	10.00	104.7	145	70-130	3.28	20	<sup>2</sup>	12/7/2012 0925h
1212046-001BMSD	Magnesium	mg/L	E200.7	47.0	10.00	38.03	89.8	70-130	4.04	20		12/10/2012 1357h
1212046-001BMSD	Potassium	mg/L	E200.7	11.3	10.00	2.355	89.6	70-130	2.35	20		12/10/2012 1505h
1212046-011BMSD	Calcium	mg/L	E200.7	141	10.00	125.2	154	70-130	2.72	20	<sup>2</sup>	12/6/2012 1748h
1212046-011BMSD	Magnesium	mg/L	E200.7	44.7	10.00	36.31	83.7	70-130	2.56	20		12/7/2012 1027h
1212046-011BMSD	Magnesium	mg/L	E200.7	49.0	10.00	38.37	106	70-130	0.82	20		12/10/2012 1039h
1212046-011BMSD	Sodium	mg/L	E200.7	55.4	10.00	44.93	105	70-130	0.561	20		12/10/2012 1039h
1212046-011BMSD	Potassium	mg/L	E200.7	11.7	10.00	1.872	98.3	70-130	0.126	20		12/11/2012 1127h
1212046-001EMSD	Cadmium	mg/L	E200.8	0.192	0.2000	0.001268	95.5	75-125	3.39	20		12/11/2012 1722h
1212046-001EMSD	Lead	mg/L	E200.8	0.182	0.2000	0.001546	90.4	75-125	3.59	20		12/11/2012 1722h
1212046-001EMSD	Arsenic	mg/L	E200.8	0.197	0.2000	0.002327	97.5	75-125	0.439	20		12/13/2012 0310h
1212046-001EMSD	Zinc	mg/L	E200.8	1.59	1.000	0.6348	96.0	75-125	1.32	20		12/13/2012 0310h
1212046-011EMSD	Cadmium	mg/L	E200.8	0.190	0.2000	0.0001060	95.0	75-125	1.32	20		12/11/2012 1909h
1212046-011EMSD	Lead	mg/L	E200.8	0.188	0.2000	0.0006490	93.5	75-125	0.511	20		12/11/2012 1909h
1212046-011EMSD	Arsenic	mg/L	E200.8	0.204	0.2000	0.003498	100	75-125	1.19	20		12/13/2012 0504h
1212046-011EMSD	Zinc	mg/L	E200.8	1.05	1.000	0.04872	100	75-125	1.88	20		12/13/2012 0504h
1212046-001BMSD	Arsenic	mg/L	E200.8	0.201	0.2000	0.004532	98.2	75-125	2.35	20		12/11/2012 1342h
1212046-001BMSD	Cadmium	mg/L	E200.8	0.197	0.2000	0.002180	97.3	75-125	2.13	20		12/11/2012 1342h
1212046-001BMSD	Lead	mg/L	E200.8	0.222	0.2000	0.03387	93.8	75-125	2	20		12/11/2012 1342h
1212046-001BMSD	Zinc	mg/L	E200.8	1.75	1.000	0.7285	102	75-125	2.72	20		12/13/2012 0006h
1212046-011BMSD	Arsenic	mg/L	E200.8	0.204	0.2000	0.004552	99.9	75-125	3.68	20		12/11/2012 1529h
1212046-011BMSD	Cadmium	mg/L	E200.8	0.190	0.2000	0.0002170	94.8	75-125	0.162	20		12/11/2012 1529h
1212046-011BMSD	Lead	mg/L	E200.8	0.194	0.2000	0.006632	93.6	75-125	1.37	20		12/11/2012 1529h
1212046-011BMSD	Zinc	mg/L	E200.8	1.05	1.000	0.05034	100	75-125	1.08	20		12/13/2012 0152h

<sup>2</sup> - Analyte concentration is too high for accurate matrix spike recovery and/or RPD.



463 West 3600 South

Salt Lake City, UT 84115

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687

e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** United Park City Mines Co.

**Lab Set ID:** 1212046

**Project:** Watershed

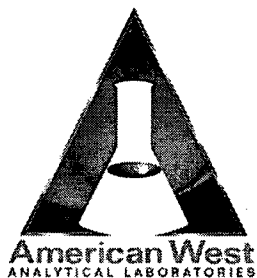
**Contact:** Kerry Gee

**Dept:** WC

**QC Type:** DUP

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1212046-001ADUP	Total Dissolved Solids	mg/L	SM2540C	1,000		1,060		-	5.83	5	@	12/7/2012 1310h

@ - High RPD due to suspected sample non-homogeneity or matrix interference.



463 West 3600 South

Salt Lake City, UT 84115

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687

e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** United Park City Mines Co.

**Lab Set ID:** 1212046

**Project:** Watershed

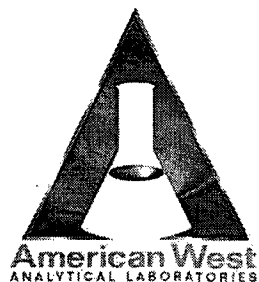
**Contact:** Kerry Gee

**Dept:** WC

**QC Type:** LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS-R48043	Alkalinity (as CaCO <sub>3</sub> )	mg/L	SM2320B	51,000	50,000	0	102	90-110				12/5/2012 0800h
LCS-R48045	Alkalinity (as CaCO <sub>3</sub> )	mg/L	SM2320B	50,100	50,000	0	100	90-110				12/5/2012 1000h
LCS-R48099	Chloride	mg/L	SM4500-Cl-E	25.4	25.00	0	102	90-110				12/6/2012 1624h
LCS-R48218	Nitrate/Nitrite (as N)	mg/L	E353.2	1.00	1.000	0	100	90-110				12/10/2012 2033h
LCS-R48088	Sulfate	mg/L	SM4500-SO <sub>4</sub> -E	982	1,000	0	98.2	90-110				12/6/2012 0954h
LCS-R48128	Sulfate	mg/L	SM4500-SO <sub>4</sub> -E	946	1,000	0	94.6	90-110				12/7/2012 0715h
LCS-R48178	Total Dissolved Solids	mg/L	SM2540C	198	205.0	0	96.6	80-120				12/7/2012 1310h

Report Date: 12/18/2012 Page 40 of 44



463 West 3600 South

Salt Lake City, UT 84115

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687

e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

## QC SUMMARY REPORT

**Client:** United Park City Mines Co.

**Lab Set ID:** 1212046

**Project:** Watershed

**Contact:** Kerry Gee

**Dept:** WC

**QC Type:** LCSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCSD-R48099	Chloride	mg/L	SM4500-CL-E	24.9	25.00	0	99.6	90-110	1.9	10		12/6/2012 1625h



463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687  
e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

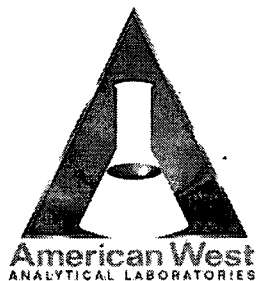
Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** United Park City Mines Co.  
**Lab Set ID:** 1212046  
**Project:** Watershed

**Contact:** Kerry Gee  
**Dept:** WC  
**QC Type:** MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-R48043	Bicarbonate (as CaCO <sub>3</sub> )	mg/L	SM2320B	< 10.0				-				12/5/2012 0800h
MB-R48043	Carbonate (as CaCO <sub>3</sub> )	mg/L	SM2320B	< 10.0				-				12/5/2012 0800h
MB-R48045	Bicarbonate (as CaCO <sub>3</sub> )	mg/L	SM2320B	< 10.0				-				12/5/2012 1000h
MB-R48045	Carbonate (as CaCO <sub>3</sub> )	mg/L	SM2320B	< 10.0				-				12/5/2012 1000h
MB-R48099	Chloride	mg/L	SM4500-Cl-E	< 5.00				-				12/6/2012 1623h
MB-R48218	Nitrate/Nitrite (as N)	mg/L	E353.2	< 0.0100				-				12/10/2012 2032h
MB-R48088	Sulfate	mg/L	SM4500-SO4-E	< 5.00				-				12/6/2012 0954h
MB-R48128	Sulfate	mg/L	SM4500-SO4-E	< 5.00				-				12/7/2012 0715h
MB-R48178	Total Dissolved Solids	mg/L	SM2540C	< 10.0				-				12/7/2012 1310h



463 West 3600 South

Salt Lake City, UT 84115

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687

e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** United Park City Mines Co.

**Lab Set ID:** 1212046

**Project:** Watershed

**Contact:** Kerry Gee

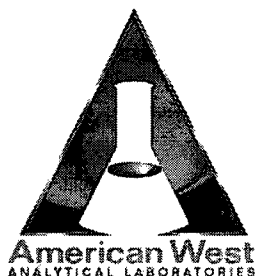
**Dept:** WC

**QC Type:** MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1212046-001CMS	Alkalinity (as CaCO <sub>3</sub> )	mg/L	SM2320B	265	100.0	162.9	102	80-120				12/5/2012 0800h
1212046-002CMS	Alkalinity (as CaCO <sub>3</sub> )	mg/L	SM2320B	324	100.0	222.0	102	80-120				12/5/2012 1000h
1212046-001CMS	Chloride	mg/L	SM4500-Cl-E	350	100.0	277.0	72.8	90-110			'	12/6/2012 1659h
1212046-002CMS	Chloride	mg/L	SM4500-Cl-E	373	100.0	323.0	50.4	90-110			'	12/6/2012 1702h
1212046-001DMS	Nitrate/Nitrite (as N)	mg/L	E353.2	1.33	1.000	0.2602	107	90-110				12/10/2012 2105h
1212046-001CMS	Sulfate	mg/L	SM4500-SO <sub>4</sub> -E	446	250.0	188.1	103	80-120				12/6/2012 0954h
1212046-011CMS	Sulfate	mg/L	SM4500-SO <sub>4</sub> -E	445	250.0	191.8	101	80-120				12/7/2012 0715h

' - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.





463 West 3600 South

Salt Lake City, UT 84115

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687

e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

## QC SUMMARY REPORT

**Client:** United Park City Mines Co.

**Lab Set ID:** 1212046

**Project:** Watershed

**Contact:** Kerry Gee

**Dept:** WC

**QC Type:** MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1212046-001CMSD	Alkalinity (as CaCO <sub>3</sub> )	mg/L	SM2320B	261	100.0	162.9	98.4	80-120	1.37	10		12/5/2012 0800h
1212046-002CMSD	Alkalinity (as CaCO <sub>3</sub> )	mg/L	SM2320B	320	100.0	222.0	98.4	80-120	1.12	10		12/5/2012 1000h
1212046-001CMSD	Chloride	mg/L	SM4500-Cl-E	357	100.0	277.0	80.2	90-110	2.11	10	'	12/6/2012 1700h
1212046-002CMSD	Chloride	mg/L	SM4500-Cl-E	401	100.0	323.0	78.5	90-110	7.24	10	'	12/6/2012 1703h
1212046-001DMSD	Nitrate/Nitrite (as N)	mg/L	E353.2	1.38	1.000	0.2602	112	90-110	4.01	10	'	12/10/2012 2106h
1212046-001CMSD	Sulfate	mg/L	SM4500-SO <sub>4</sub> -E	460	250.0	188.1	109	80-120	3.16	10		12/6/2012 0954h
1212046-011CMSD	Sulfate	mg/L	SM4500-SO <sub>4</sub> -E	475	250.0	191.8	113	80-120	6.48	10		12/7/2012 0715h

' - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

# American West Analytical Laboratories

UL

## WORK ORDER Summary

Client: United Park City Mines Co.

Client ID: UNI100

Project: Watershed

Comments: QC 2+. Email copy of report to Todd Leeds at RMC. / Cd DL's must be <0.0008 ppm and all other DL's should be as low as possible. Footnote report samples for NO2/NO3 preserved in lab.;

Contact: Kerry Gee

QC Level: II+

Work Order: 1212046

Page 1 of 7 12/4/2012

WO Type: Standard

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel Storage
1212046-001A	OU2/3 - RF8 - SW	12/4/2012	12/4/2012 1437h	12/18/2012	Aqueous	TDS-W-2540C	<input type="checkbox"/> ww - tds
1212046-001B						200.7-W	<input checked="" type="checkbox"/> df / total metals
SEL Analytes: CA MG K NA						200.7-W-PR	<input type="checkbox"/> df / total metals
						200.8-W	<input checked="" type="checkbox"/> df / total metals
SEL Analytes: AS CD PB ZN						200.8-W-PR	<input type="checkbox"/> df / total metals
1212046-001C						ALK-W-2320B	<input checked="" type="checkbox"/> df /wc
SEL Analytes: ALKB ALKC						CL-W-4500CLE	<input type="checkbox"/> df /wc
						SO4-W-4500SO4E	<input type="checkbox"/> df /wc
1212046-001D						NO2/NO3-W-353.2	<input type="checkbox"/> df no2/no3
1212046-001E						200.8-DIS	<input checked="" type="checkbox"/> df - dis metals
SEL Analytes: AS CD PB ZN						200.8-DIS-PR	<input type="checkbox"/> df - dis metals
						FILTER-PR	<input type="checkbox"/> df - dis metals
1212046-002A	OU1 - MF - SW					TDS-W-2540C	<input type="checkbox"/> ww - tds
1212046-002B						200.7-W	<input checked="" type="checkbox"/> df / total metals
SEL Analytes: CA MG K NA						200.7-W-PR	<input type="checkbox"/> df / total metals
						200.8-W	<input checked="" type="checkbox"/> df / total metals
SEL Analytes: AS CD PB ZN						200.8-W-PR	<input type="checkbox"/> df / total metals

FOR LABORATORY USE ONLY [fill out on page 1]:

%M ☒

RT ☒

CN ☒

TAT ☒

QC ☒

HOK

HOK 20

HOK

COC Emailed

**WORK ORDER Summary**

Client: United Park City Mines Co.

Work Order: 1212046

Page 2 of 7 12/4/2012

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage	
1212046-002C	OU1 - MF - SW SEL Analytes: ALKB ALKC	12/4/2012	12/4/2012 1437h	12/18/2012	Aqueous	ALK-W-2320B	<input checked="" type="checkbox"/>	df/wc	1
						CL-W-4500CLE	<input type="checkbox"/>	df/wc	
						SO4-W-4500SO4E	<input type="checkbox"/>	df/wc	
1212046-002D						NO2/NO3-W-353.2	<input type="checkbox"/>	df no2/no3	
1212046-002E						200.8-DIS	<input checked="" type="checkbox"/>	df - dis metals	
	SEL Analytes: AS CD PB ZN					200.8-DIS-PR	<input type="checkbox"/>	df - dis metals	
						FILTER-PR	<input type="checkbox"/>	df - dis metals	
1212046-003A	OU1 - Hwy Pond - SW					TDS-W-2540C	<input type="checkbox"/>	ww - tds	
1212046-003B						200.7-W	<input checked="" type="checkbox"/>	df / total metals	
	SEL Analytes: CA MG K NA					200.7-W-PR	<input type="checkbox"/>	df / total metals	
						200.8-W	<input checked="" type="checkbox"/>	df / total metals	
	SEL Analytes: AS CD PB ZN					200.8-W-PR	<input type="checkbox"/>	df / total metals	
1212046-003C						ALK-W-2320B	<input checked="" type="checkbox"/>	df/wc	
	SEL Analytes: ALKB ALKC					CL-W-4500CLE	<input type="checkbox"/>	df/wc	
						SO4-W-4500SO4E	<input type="checkbox"/>	df/wc	
1212046-003D						NO2/NO3-W-353.2	<input type="checkbox"/>	df no2/no3	
1212046-003E						200.8-DIS	<input checked="" type="checkbox"/>	df - dis metals	
	SEL Analytes: AS CD PB ZN					200.8-DIS-PR	<input type="checkbox"/>	df - dis metals	
						FILTER-PR	<input type="checkbox"/>	df - dis metals	
1212046-004A	OU3 - SFB - SW					TDS-W-2540C	<input type="checkbox"/>	ww - tds	
1212046-004B						200.7-W	<input checked="" type="checkbox"/>	df / total metals	
	SEL Analytes: CA MG K NA								

FOR LABORATORY USE ONLY (fill out on page 1): %M ☐ RT ☐ CN ☐ TAT ☐ QC ☐

HOK \_\_\_\_\_

HOK \_\_\_\_\_

HOK \_\_\_\_\_

COC Emailed \_\_\_\_\_

**WORK ORDER Summary**

Client: United Park City Mines Co.

Work Order: **1212046**

Page 3 of 7 12/4/2012

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel Storage	
1212046-004B	OU3 - SFB - SW	12/4/2012	12/4/2012 1437h	12/18/2012	Aqueous	200.7-W-PR	<input type="checkbox"/> df / total metals	1
SEL Analytes: AS CD PB ZN						200.8-W	<input checked="" type="checkbox"/> df / total metals	
						200.8-W-PR	<input type="checkbox"/> df / total metals	
1212046-004C						ALK-W-2320B	<input checked="" type="checkbox"/> df /wc	
SEL Analytes: ALKB ALKC						CL-W-4500CLE	<input type="checkbox"/> df /wc	
						SO4-W-4500SO4E	<input type="checkbox"/> df /wc	
1212046-004D						NO2/NO3-W-353.2	<input type="checkbox"/> df no2/no3	
1212046-004E						200.8-DIS	<input checked="" type="checkbox"/> df - dis metals	
SEL Analytes: AS CD PB ZN						200.8-DIS-PR	<input type="checkbox"/> df - dis metals	
						FILTER-PR	<input type="checkbox"/> df - dis metals	
1212046-005A	OU3 -AFB Opp - SW					TDS-W-2540C	<input type="checkbox"/> ww - tds	
1212046-005B						200.7-W	<input checked="" type="checkbox"/> df / total metals	
SEL Analytes: CA MG K NA						200.7-W-PR	<input type="checkbox"/> df / total metals	
						200.8-W	<input checked="" type="checkbox"/> df / total metals	
SEL Analytes: AS CD PB ZN						200.8-W-PR	<input type="checkbox"/> df / total metals	
1212046-005C						ALK-W-2320B	<input checked="" type="checkbox"/> df /wc	
SEL Analytes: ALKB ALKC						CL-W-4500CLE	<input type="checkbox"/> df /wc	
						SO4-W-4500SO4E	<input type="checkbox"/> df /wc	
1212046-005D						NO2/NO3-W-353.2	<input type="checkbox"/> df no2/no3	
1212046-005E						200.8-DIS	<input checked="" type="checkbox"/> df - dis metals	
SEL Analytes: AS CD PB ZN						200.8-DIS-PR	<input type="checkbox"/> df - dis metals	

**WORK ORDER Summary**

Client: United Park City Mines Co.

Work Order: **1212046**

Page 4 of 7 12/4/2012

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage	
1212046-005E	OU3 - AFB Opp - SW	12/4/2012	12/4/2012 1437h	12/18/2012	Aqueous	FILTER-PR	<input type="checkbox"/>	df - dis metals	1
1212046-006A	OU3 - RFR - SW					TDS-W-2540C	<input type="checkbox"/>	ww - tds	
1212046-006B						200.7-W	<input checked="" type="checkbox"/>	df / total metals	
SEL Analytes: CA MG K NA						200.7-W-PR	<input type="checkbox"/>	df / total metals	
SEL Analytes: AS CD PB ZN						200.8-W	<input checked="" type="checkbox"/>	df / total metals	
SEL Analytes: AS CD PB ZN						200.8-W-PR	<input type="checkbox"/>	df / total metals	
1212046-006C						ALK-W-2320B	<input checked="" type="checkbox"/>	df /wc	
SEL Analytes: ALKB ALKC						CL-W-4500CLE	<input type="checkbox"/>	df /wc	
						SO4-W-4500SO4E	<input type="checkbox"/>	df /wc	
1212046-006D						NO2/NO3-W- 353.2	<input type="checkbox"/>	df no2/no3	
1212046-006E						200.8-DIS	<input checked="" type="checkbox"/>	df - dis metals	
SEL Analytes: AS CD PB ZN						200.8-DIS-PR	<input type="checkbox"/>	df - dis metals	
						FILTER-PR	<input type="checkbox"/>	df - dis metals	
1212046-007A	PRO - Weir - SW					TDS-W-2540C	<input type="checkbox"/>	ww - tds	
1212046-007B						200.7-W	<input checked="" type="checkbox"/>	df / total metals	
SEL Analytes: CA MG K NA						200.7-W-PR	<input type="checkbox"/>	df / total metals	
SEL Analytes: AS CD PB ZN						200.8-W	<input checked="" type="checkbox"/>	df / total metals	
SEL Analytes: AS CD PB ZN						200.8-W-PR	<input type="checkbox"/>	df / total metals	
1212046-007C						ALK-W-2320B	<input checked="" type="checkbox"/>	df /wc	
SEL Analytes: ALKB ALKC						CL-W-4500CLE	<input type="checkbox"/>	df /wc	
						SO4-W-4500SO4E	<input type="checkbox"/>	df /wc	

FOR LABORATORY USE ONLY (fill out on page 1): %M ☐ RT ☐ CN ☐ TAT ☐ QC ☐

HOK \_\_\_\_\_ HOK \_\_\_\_\_ HOK \_\_\_\_\_ COC Emailed \_\_\_\_\_

**WORK ORDER Summary**

Client: United Park City Mines Co.

Work Order: **1212046**

Page 5 of 7 12/4/2012

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage
1212046-007D	PRO - Weir - SW	12/4/2012	12/4/2012 1437h	12/18/2012	Aqueous	NO2/NO3-W-353.2	<input type="checkbox"/>	df no2/no3 1
1212046-007E	SEL Analytes: AS CD PB ZN					200.8-DIS	<input checked="" type="checkbox"/>	df - dis metals
						200.8-DIS-PR	<input type="checkbox"/>	df - dis metals
						FILTER-PR	<input type="checkbox"/>	df - dis metals
1212046-008A	PRO - WL Pipe - SW					TDS-W-2540C	<input type="checkbox"/>	ww - tds
1212046-008B	SEL Analytes: CA MG K NA					200.7-W	<input checked="" type="checkbox"/>	df / total metals
						200.7-W-PR	<input type="checkbox"/>	df / total metals
						200.8-W	<input checked="" type="checkbox"/>	df / total metals
	SEL Analytes: AS CD PB ZN							
						200.8-W-PR	<input type="checkbox"/>	df / total metals
1212046-008C	SEL Analytes: ALKB ALKC					ALK-W-2320B	<input checked="" type="checkbox"/>	df /wc
						CL-W-4500CLE	<input type="checkbox"/>	df /wc
						SO4-W-4500SO4E	<input type="checkbox"/>	df /wc
1212046-008D						NO2/NO3-W-353.2	<input type="checkbox"/>	df no2/no3
1212046-008E	SEL Analytes: AS CD PB ZN					200.8-DIS	<input checked="" type="checkbox"/>	df - dis metals
						200.8-DIS-PR	<input type="checkbox"/>	df - dis metals
						FILTER-PR	<input type="checkbox"/>	df - dis metals
1212046-009A	OU3 - Bweir - SW					TDS-W-2540C	<input type="checkbox"/>	ww - tds
1212046-009B	SEL Analytes: CA MG K NA					200.7-W	<input checked="" type="checkbox"/>	df / total metals
						200.7-W-PR	<input type="checkbox"/>	df / total metals
						200.8-W	<input checked="" type="checkbox"/>	df / total metals
	SEL Analytes: AS CD PB ZN							

**WORK ORDER Summary**

Client: United Park City Mines Co.

Work Order: 1212046

Page 6 of 7 12/5/2012

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage	
1212046-009B	OU3 - Bweir - SW	12/4/2012	12/4/2012 1437h	12/18/2012	Aqueous	200.8-W-PR	<input type="checkbox"/>	df / total metals	1
1212046-009C	SEL Analytes: ALKB ALKC					ALK-W-2320B	<input checked="" type="checkbox"/>	df /wc	
						CL-W-4500CLE	<input type="checkbox"/>	df /wc	
						SO4-W-4500SO4E	<input type="checkbox"/>	df /wc	
1212046-009D						NO2/NO3-W-353.2	<input type="checkbox"/>	df no2/no3	
1212046-009E	SEL Analytes: AS CD PB ZN					200.8-DIS	<input checked="" type="checkbox"/>	df - dis metals	
						200.8-DIS-PR	<input type="checkbox"/>	df - dis metals	
						FILTER-PR	<input type="checkbox"/>	df - dis metals	
1212046-010A	Pro - 50 Weir - SW					TDS-W-2540C	<input type="checkbox"/>	ww - tds	
1212046-010B	SEL Analytes: CA MG K NA					200.7-W	<input checked="" type="checkbox"/>	df / total metals	
						200.7-W-PR	<input type="checkbox"/>	df / total metals	
						200.8-W	<input checked="" type="checkbox"/>	df / total metals	
	SEL Analytes: AS CD PB ZN					200.8-W-PR	<input type="checkbox"/>	df / total metals	
1212046-010C	SEL Analytes: ALKB ALKC					ALK-W-2320B	<input checked="" type="checkbox"/>	df /wc	
						CL-W-4500CLE	<input type="checkbox"/>	df /wc	
						SO4-W-4500SO4E	<input type="checkbox"/>	df /wc	
1212046-010D						NO2/NO3-W-353.2	<input type="checkbox"/>	df no2/no3	
1212046-010E	SEL Analytes: AS CD PB ZN					200.8-DIS	<input checked="" type="checkbox"/>	df - dis metals	
						200.8-DIS-PR	<input type="checkbox"/>	df - dis metals	
						FILTER-PR	<input type="checkbox"/>	df - dis metals	
1212046-011A	PHAP - SW					TDS-W-2540C	<input type="checkbox"/>	ww - tds	

**WORK ORDER Summary**

Client: United Park City Mines Co.

Work Order: **1212046**

Page 7 of 7 12/5/2012

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage
1212046-011B	PHAP - SW	12/4/2012	12/4/2012 1437h	12/18/2012	Aqueous	200.7-W	<input checked="" type="checkbox"/>	df / total metals 1
SEL Analytes: CA MG K NA						200.7-W-PR	<input type="checkbox"/>	df / total metals
						200.8-W	<input checked="" type="checkbox"/>	df / total metals
SEL Analytes: AS CD PB ZN						200.8-W-PR	<input type="checkbox"/>	df / total metals
1212046-011C						ALK-W-2320B	<input checked="" type="checkbox"/>	df /wc
SEL Analytes: ALKB ALKC						CL-W-4500CLE	<input type="checkbox"/>	df /wc
						SO4-W-4500SO4E	<input type="checkbox"/>	df /wc
1212046-011D						NO2/NO3-W-353.2	<input type="checkbox"/>	df no2/no3
1212046-011E						200.8-DIS	<input checked="" type="checkbox"/>	df - dis metals
SEL Analytes: AS CD PB ZN						200.8-DIS-PR	<input type="checkbox"/>	df - dis metals
						FILTER-PR	<input type="checkbox"/>	df - dis metals






1/2

# RMC

## Laboratory Services Request Form

12/2 04/6

I. CLIENT INFORMATION				SEND REQUESTS TO:	
Client Name: <u>UNITED PARK CITY MINES</u>				<b>American West</b> <b>Analytical Laboratories</b> <b>463 W. 3600 South</b> <b>Salt Lake City, UT</b> <b>84115</b>	
Client Address: <u>PO BOX 1450 PARK CITY, UT 84060</u>					
Client Phone: <u>435-608-0954</u>					
Client Fax: <u>435-615-1239</u>					
II. ACCOUNT INFORMATION				<b>Patrick Noteboom</b> <b>Phone # (801) 750-2585</b> <b>Fax (801)-263-8687</b>	
Account Name: <u>Watershed</u>					
Sample Questions- <u>Todd Leeds RMC- 801-255-2626</u>					
TAT: <u>Standard / QC 2+ per Project</u> P.O. No: <u>Watershed</u>					
III. REPORT INSTRUCTIONS					
Report Results To: <u>KERRY GEE- UPCM AND TODD LEEDS - RMC FAX-255-3266</u>				<b>INCLUDE EDD</b>	
Report Address: <u>PO BOX 1450 PARK CITY UT 84060 AND TODD LEEDS, RMC, 8138 S. STATE ST., STE 2A, MIDVALE UT 84047</u>					
Please Forward Results By: <u>US Mail ( X )    Fed Ex ( )    Fax ( X )    Othe Todd@rmc-ut.com</u>					
Services Requested below are required no later than _____ (date)					
IV. TYPE OF SERVICE REQUESTED					
Please analyze the enclosed environmental samples for:					
Lab Use Only Lab No.	Field Sample No./Description	Sampling Date & Time	No. of Cont.	Analysis Requested	
1	OU2/3-RF8-SW	12-4-2012	4	Major cations	
2	OU1-MF-SW	↓	↓	Major anions	
3	OU1-Hwy Pond-SW			Total and Dissolved As, Cd, Pb, Zn	
4	OU3-SFB-SW			TDS	
5	OU3-AFB Off-SW				
6	OU3-RPR-SW				
7	PRO-Weir-SW				
8	PRO-WL Pipe-SW				
9	OU3-BWeir-SW				
10	PRO-50weir-SW				
notes: For water samples, Cd detection limits must be <0.0008 ppm and all detection limits should be as low as practical.					
V. CHAIN OF CUSTODY RECORD					
Dispatched by: 		Date	Time	Courier Co. Name	
Relinquished by: 		Date 12-4-2012	Time 14:37	Airbill #	
Received by: 		Date 12/4/12	Time 1437	Custody Seal Intact?	
Received for lab by:		Date	Time	Yes                      No	

2/2

# RMC

## Laboratory Services Request Form

1212046

I. CLIENT INFORMATION				SEND REQUESTS TO:	
Client Name: <u>UNITED PARK CITY MINES</u>				<b>American West</b> <b>Analytical Laboratories</b> <b>463 W. 3600 South</b> <b>Salt Lake City, UT</b> <b>84115</b>	
Client Address: <u>PO BOX 1450 PARK CITY, UT 84060</u>					
Client Phone: <u>435-608-0954</u>					
Client Fax: <u>435-615-1239</u>					
II. ACCOUNT INFORMATION					
Account Name: <u>Watershed</u>				<b>Patrick Noteboom</b> <b>Phone # (801) 750-2585</b> <b>Fax (801)-263-8687</b>	
Sample Questions- <u>Todd Leeds RMC- 801-255-2626</u>					
TAT: <u>Standard</u>				P.O. No: <u>Watershed</u>	
III. REPORT INSTRUCTIONS					
Report Results To: <u>KERRY GEE- UPCM AND TODD LEEDS - RMC FAX-255-3266</u>				<b>INCLUDE EDD</b>	
Report Address: <u>PO BOX 1450 PARK CITY UT 84060 AND TODD LEEDS, RMC, 8138 S. STATE ST., STE 2A, MIDVALE UT 84047</u>					
Please Forward Results By: <u>US Mail (X)</u> <u>Fed Ex ( )</u> <u>Fax (X )</u> <u>Othe Todd@rmc-ut.com</u>					
Services Requested below are required no later than _____ (date)					
IV. TYPE OF SERVICE REQUESTED					
Please analyze the enclosed environmental samples for:					
Lab Use Only Lab No.	Field Sample No./Description	Sampling Date & Time	No. of Cont.	Analysis Requested	
11	PHAP-SW	12-4-2012	4	Major cations	
				Major anions	
				Total and Dissolved As, Cd, Pb, Zn	
				TDS	
notes: For water samples, Cd detection limits must be <0.0008 ppm and all detection limits should be as low as practical.					
V. CHAIN OF CUSTODY RECORD					
Dispatched by:		Date	Time	Courier Co. Name	
Relinquished by: <u>[Signature]</u>		Date <u>12-4-2012</u>	Time <u>14:37</u>		
Received by: <u>[Signature]</u>		Date <u>12/4/12</u>	Time <u>1437</u>	Airbill #	
Received for lab by:		Date	Time	Custody Seal Intact?	
				Yes                  No	

Lab Set ID: 1212046

<b>Samples Were:</b>	<b>COC Tape Was:</b>	<b>Container Type:</b>	<b>No. Rec.</b>
<input type="checkbox"/> Shipped By:	<b>Present on Outer Package</b>	<input checked="" type="checkbox"/> AWAL Supplied Plastic	
<input checked="" type="checkbox"/> Hand Delivered	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input checked="" type="checkbox"/> AWAL Supplied Clear Glass	
<input type="checkbox"/> Ambient	<b>Unbroken on Outer package</b>	<input checked="" type="checkbox"/> AWAL Supplied Amber Glass	
<input checked="" type="checkbox"/> Chilled	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input checked="" type="checkbox"/> AWAL Supplied VOA/TOC/TOX Vials	
Temperature <u>1.0 °C</u>	<b>Present on Sample</b>	<input type="checkbox"/> Amber <input type="checkbox"/> Clear <input type="checkbox"/> Headspace <input type="checkbox"/> No Headspace	
Rec. Broken/Leaking <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Non AWAL Supplied Container	
Notes:	<b>Unbroken on Sample</b>	Notes:	
Properly Preserved <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Notes: <u>N02/N03 received unpreserved</u>	Notes:		
Rec. Within Hold <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>Discrepancies Between Labels and COC</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Notes:		Notes:	

Bottle Type	Preservative	All pHs OK	1	2	3	4	5	6	7	8	9	10	11		
Ammonia	pH < 2 H <sub>2</sub> SO <sub>4</sub>														
COD	pH < 2 H <sub>2</sub> SO <sub>4</sub>														
Cyanide	pH > 12 NaOH														
Metals	pH < 2 HNO <sub>3</sub>		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
NO <sub>2</sub> & NO <sub>3</sub>	pH < 2 H <sub>2</sub> SO <sub>4</sub>		*	*	*	*	*	*	*	*	*	*	*		
Nutrients	pH < 2 H <sub>2</sub> SO <sub>4</sub>														
O & G	pH < 2 HCL														
Phenols	pH < 2 H <sub>2</sub> SO <sub>4</sub>														
Sulfide	pH > 9 NaOH, ZnAC														
TKN	pH < 2 H <sub>2</sub> SO <sub>4</sub>														
TOC	pH < 2 H <sub>3</sub> PO <sub>4</sub>														
T PO <sub>4</sub>	pH < 2 H <sub>2</sub> SO <sub>4</sub>														
TPH	pH < 2 HCL														

Procedure:

- 1) Pour a small amount of sample in the sample lid
- 2) Pour sample from Lid gently over wide range pH paper
- 3) Do Not dip the pH paper in the sample bottle or lid
- 4) If sample is not preserved properly list its extension and receiving pH in the appropriate column above
- 5) Flag COC and notify client for further instructions
- 6) Place client conversation on COC
- 7) Samples may be adjusted at client request

\* Samples were received unpreserved and adjusted in receiving.



**Memorandum**

**January 10, 2013**

**Transmitted Electronically via Email**

**To: Kerry Gee**  
**From: Daniel Dean**  
**Re: Silver Creek Middle Reach 2012 Sampling Summary**

On December 4, 2012, RMC collected eleven water samples from ten locations in the Silver Creek watershed between Prospector Square and State Highway 248. Sample locations and results are detailed in Figure 1, Figure 2 and Table 1 (attached). Of the ten locations sampled on December 4, seven were previously sampled on May 15 and/or July 17, 2012.

There were two primary objectives for the December 4, 2012 sampling event:

1. Supplement water quality data collected from the Silver Creek Watershed in May and July of 2012; and
2. Investigate the influence of leakage from the Pace Homer ditch to Silver Creek. Significant leakage from the Pace Homer ditch was occurring approximately 50 yards upstream of the upstream Rail Trail footbridge and was accounting for approximately 75% of the flow in Silver Creek at the footbridge. It is unknown whether leakage from the Pace Homer ditch was occurring during the May or July sampling events. Future sampling events should include an inspection of the Pace Homer ditch and sample collection as necessary to evaluate its impact on water quality in Silver Creek.

Water quality samples were analyzed for total and dissolved arsenic, cadmium, lead and zinc, plus major cations, major anions and total dissolved solids. Cadmium and zinc results are compared to the dissolved cadmium and zinc targets in the Silver Creek Total Maximum Daily Load (TMDL) in the dissolved metals discussion below. Complete sample results are presented in Table 1.

Field duplicate samples were collected at the Silver Creek Weir during the December 4 sampling and the County Road crossing during the May 15 sampling. Relative percent differences are presented in Table 1 and were within acceptable ranges for all parameters.

**Judge Tunnel and Prospector Drain Influence**

The Judge Tunnel was discharging into Silver Creek during all three sample events. Flow from the Judge Tunnel and the Prospector Drain/Biocell constituted the majority of the flow in Silver Creek at the weir for the July and December sampling events. Significant snowmelt runoff from the upper watershed was occurring during the May sampling event.



According to data from Park City Municipal Corporation's Engineering Evaluation/Cost Analysis Work Plan for Prospector Drain, the average flow from Prospector Drain was 75.4 gallons per minute (GPM) in May and 45.8 GPM in July. In May 77% of Prospector Drain flow was bypassing the Prospector Biocell and discharging directly into Silver Creek on average. In July 4% of Prospector Drain flow was bypassing the Prospector Biocell and discharging directly into Silver Creek on average.

Prospector Drain flow and bypass data is not available for December. RMC attempted to sample Prospector Drain during the December sample event but the pipe outlet was underwater. Figure 2 contains additional Prospector area water quality and Prospector Drain flow data.

### **Dissolved Metals Discussion**

Dissolved zinc and cadmium results within Silver Creek were generally elevated as compared to May and July 2012 results. Of the seven locations sampled within Silver Creek on December 4, five were previously sampled in May and/or July. Of the five locations with previous 2012 data, dissolved zinc and cadmium concentrations have varied by double or more at four locations (Silver Creek Weir, Upstream Rail Trail Footbridge, County Road Crossing and State Highway 248 Culvert).

Discussion of December sampling results and May/July 2012 results for specific sample locations is presented below (sample IDs from Table 1 and Figure 1 in parentheses):

- Silver Creek Weir (PRO-Weir-SW): Dissolved cadmium and zinc results were 0.00243 ppm and 0.573 ppm, respectively, which is well above Silver Creek TMDL limits. May results at this location were 0.000357 ppm for dissolved cadmium and 0.0783 ppm for dissolved zinc. This location was not sampled in July.
- Pace Homer Ditch above Prospector (PHAP-SW): Dissolved zinc and cadmium results were <0.0005 ppm and 0.0487 ppm, respectively, which is well below Silver Creek TMDL limits. This location was not sampled in May or July.
- Prospector Biocell (Pro-WL Pipe-SW): Dissolved cadmium results were <0.0005 ppm dissolved zinc was 0.0236 ppm, which is well below Silver Creek TMDL limits. July results at this location were <0.0005 ppm for dissolved cadmium and 0.014 ppm for dissolved zinc. This location was not sampled in May.
- Below Prospector (OU3-BWeir-SW): This sample was collected approximately 150 yards downstream of the Silver Creek weir. Dissolved cadmium was 0.00138 ppm, which exceeds Silver Creek TMDL limits but was lower than concentrations at the weir. Dissolved zinc was 2.02 ppm which far exceeds Silver Creek TMDL limits and was much higher than at the weir. This location was not sampled in May or July.

The large increase in dissolved zinc below Prospector may be due to influence from Prospector Drain effluent based on historic Prospector Drain data which typically has high dissolved zinc in the 5-8 ppm range, but it is unknown what the Prospector Drain flow rate was or what percentage of Prospector Drain flow was bypassing the biocell at the time of sampling.



- Upstream Rail Trail Footbridge (OU3-AFB Opp-SW and OU3-SFB-SW): Sampling results indicate that leakage from the Pace Homer ditch is creating significant dilution of dissolved zinc at this point in Silver Creek (dissolved cadmium was <0.0005 ppm in both samples). Dissolved zinc concentrations in Silver Creek were approximately 187% higher above the Pace Homer leakage inflow than at the footbridge (samples OU3-AFB Opp-SW and OU3-SFB-SW, respectively). Dissolved zinc was 0.65 ppm above the Pace Homer inflow and 0.226 ppm below. May results at this location were <0.00018 ppm for dissolved cadmium and 0.158 ppm for dissolved zinc. This location was not sampled in July.
- County Road Crossing (OU3-RFR-SW): Dissolved cadmium results were <0.0005 ppm at this location. Dissolved zinc concentrations were slightly above Silver Creek TMDL limits (0.412 ppm), but likely would have been higher without dilution from Pace Home ditch water. May and July results at this location were 0.000235 ppm and 0.000608 ppm for dissolved cadmium, and 0.216 ppm and 0.437 ppm for dissolved zinc.
- Richardson Flat Effluent (OU1-MF-SW and OU1-Hwy Pond-SW): Effluent from Richardson Flat sources (main channel and highway pond) were both <0.0005 ppm for dissolved cadmium, and 0.0626 ppm and 0.00965 ppm for dissolved zinc, respectively. These results were consistent with May and July results.
- State Highway 248 Culvert (OU2/3-RF8-SW): Dissolved cadmium and zinc results were 0.00127 ppm and 0.635 ppm, respectively, which is well above Silver Creek TMDL limits. May and July results at this location were 0.000904 ppm and <0.0005 ppm for dissolved cadmium, and 0.377 ppm and 0.111 ppm for dissolved zinc.

### **Total Metals Discussion**

Total zinc and cadmium results within Silver Creek were generally elevated as compared to May and July 2012 results. Of the seven locations sampled within Silver Creek on December 4, five were previously sampled in May and/or July. Of the five locations with previous 2012 data, total zinc and/or cadmium concentrations have varied by 50% or more at three locations (Silver Creek Weir, County Road Crossing and State Highway 248 Culvert).

Discussion of December sampling results and May/July 2012 results for specific sample locations is presented below (sample IDs from Table 1 and Figure 1 in parentheses):

- Silver Creek Weir (PRO-Weir-SW): Total cadmium and zinc results were 0.00565 ppm and 0.627 ppm, respectively. May results at this location were 0.0028 ppm for total cadmium and 0.237 ppm for total zinc. This location was not sampled in July.
- Pace Homer Ditch above Prospector (PHAP-SW): Total zinc and cadmium results were <0.0005 ppm and 0.0503 ppm, respectively. This location was not sampled in May or July.
- Prospector Biocell (Pro-WL Pipe-SW): Total cadmium results were <0.0005 ppm. Total zinc was 0.862 ppm. As noted in the dissolved metals discussion above, dissolved zinc in the biocell effluent was more than an order of magnitude lower than total zinc. High total:dissolved ratios are typical for effluent from anaerobic biotreatment systems. July results at this location were



0.000569 ppm for total cadmium and 1.35 ppm for total zinc. This location was not sampled in May.

- Below Prospector (OU3-BWeir-SW): This sample was collected approximately 150 yards downstream of the Silver Creek weir. Total cadmium was 0.0137 ppm, which is approximately double the concentration at the weir. Total zinc was 2.42 ppm, which is almost quadruple the concentration at the weir. This location was not sampled in May or July.

The large increase in total cadmium and zinc below Prospector may be due to influence from Prospector Drain effluent, but it is unknown what the Prospector Drain flow rate was or what percentage of Prospector Drain flow was bypassing the biocell at the time of sampling.

- Upstream Rail Trail Footbridge (OU3-AFB Opp-SW and OU3-SFB-SW): Sampling results indicate that leakage from the Pace Homer ditch is creating significant dilution of total cadmium and zinc at this point in Silver Creek. Total cadmium and zinc concentrations in Silver Creek were approximately 40% and 149% higher, respectively, above the Pace Homer leakage inflow than at the footbridge (samples OU3-AFB Opp-SW and OU3-SFB-SW, respectively). Total cadmium was 0.00132 ppm above the Pace Homer inflow and 0.000945 ppm below. Total zinc was 0.73 ppm above the Pace Homer inflow and 0.293 ppm below. May results at this location were 0.00186 ppm for total cadmium and 0.281 ppm for total zinc. This location was not sampled in July.
- County Road Crossing (OU3-RFR-SW): Total cadmium results were 0.0015 ppm and total zinc concentrations were 0.495 ppm. Total cadmium and zinc likely would have been higher without dilution from Pace Home ditch water. May and July results at this location were 0.00177 ppm and 0.00096 ppm, respectively, for total cadmium, and 0.342 ppm and 0.505 ppm, respectively, for total zinc.
- Richardson Flat Effluent (OU1-MF-SW and OU1-Hwy Pond-SW): Effluent from Richardson Flat sources (main channel and highway pond) were both <0.0005 ppm for total cadmium, and 0.0786 ppm and 0.0063 ppm for total zinc, respectively. These results were consistent with May and July results.
- State Highway 248 Culvert (OU2/3-RF8-SW): Total cadmium and zinc results were 0.00218 ppm and 0.728 ppm, respectively. May and July results at this location were 0.00212 ppm and <0.0005 ppm, respectively, for total cadmium, and 0.436 ppm and 0.159 ppm, respectively, for total zinc.

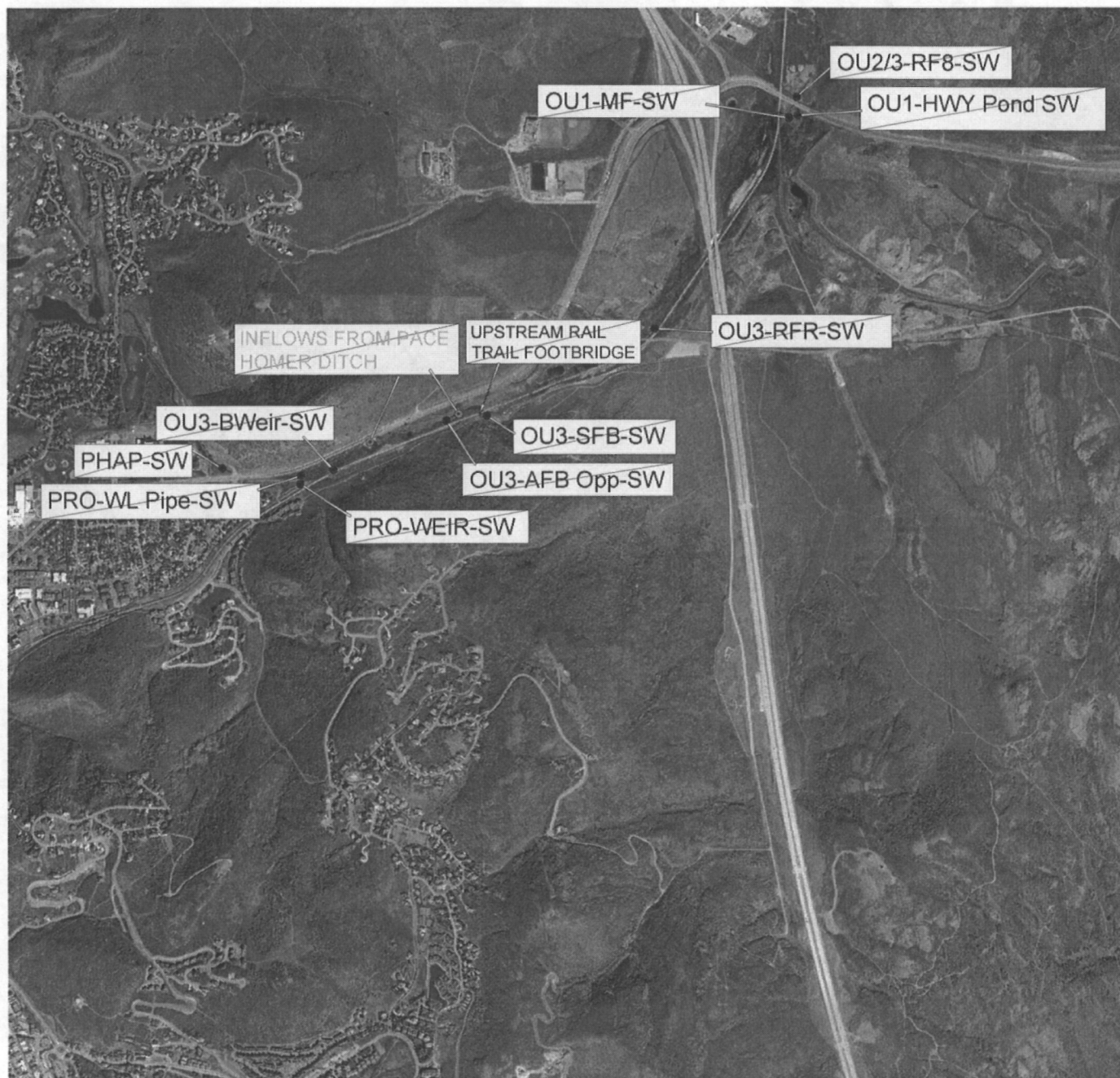
#### **Total Metals Sink between Prospector and Upstream Rail Trail Footbridge**

As noted in the above discussion and data presented in Table 1, during the December 4, 2012 sample event total cadmium and zinc decreased by 90% and 70%, respectively, between below Prospector (sample OU3-BWeir-SW) and above the upstream Rail Trail footbridge (sample OU3-AFB Opp-SW). This decrease is likely due to settling in the extensive wetlands and beaver ponds between the two locations and/or adsorption to organic materials in the wetlands. Similar decreases were not observed during the May 15 sample event, likely because high flows from spring snowmelt runoff in the upper watershed was occurring at the time. A similar comparison cannot be made for the July 17 sample event



because no samples were collected near Prospector or the upstream Rail Trail footbridge location during that sampling event.





# **LEGEND**

- SAMPLE LOCATION
- PACE HOMER DITCH INFLOW

NOTE: LOCATIONS NOT SURVEYED



NOT TO SCALE

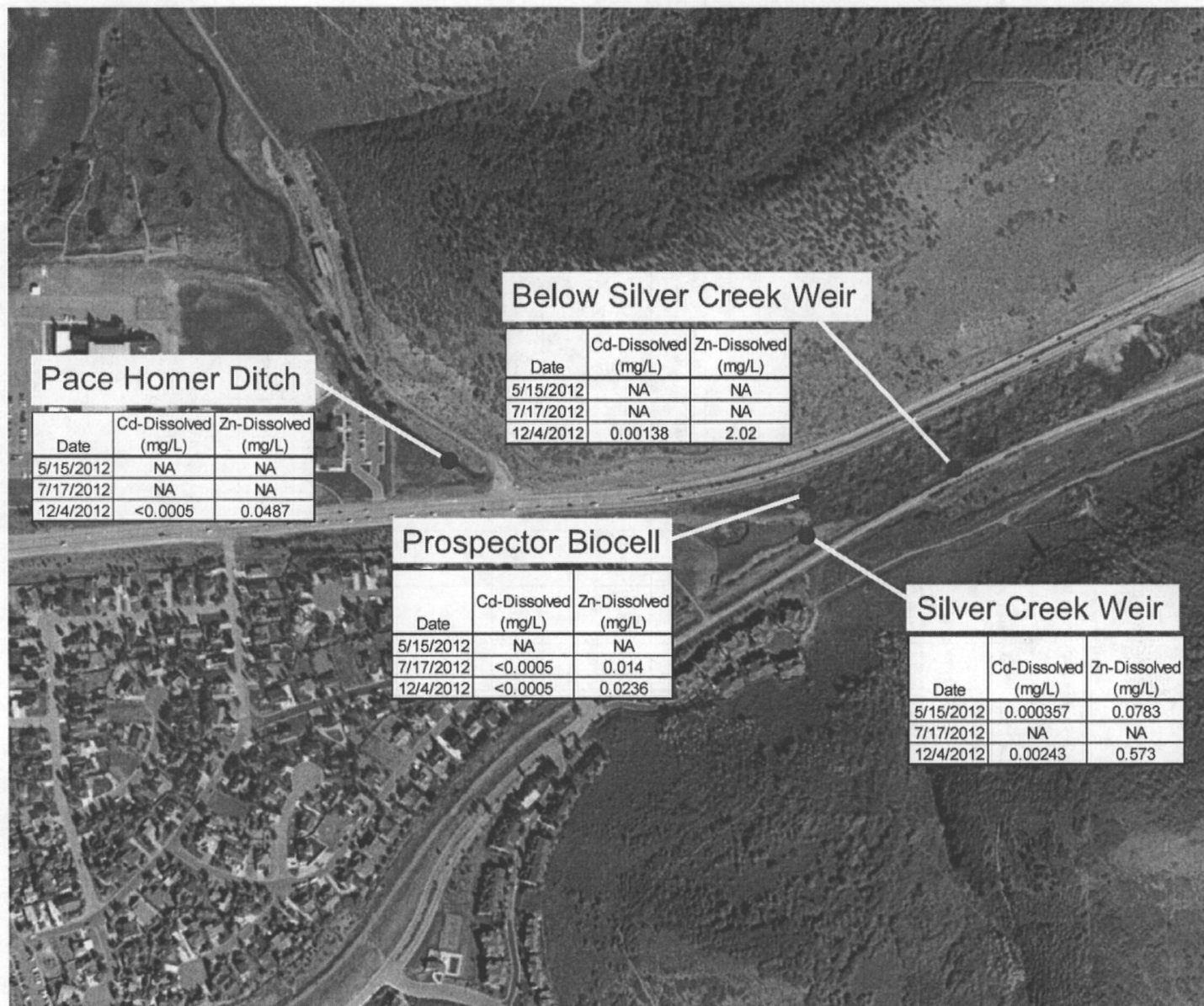
## **UNITED PARK CITY MINES**

FIGURE 1  
SILVER CREEK DECEMBER 4, 2012  
SURFACE WATER SAMPLING LOCATIONS

RESOURCE MANAGEMENT CONSULTANTS  
8136 SOUTH STATE ST.  
SUITE 2A  
MIDVALE, UT 84047  
801-255-2626

DECEMBER 2012

december 4 2012 watershed sample locations.dwg



Month	Average % Prospectors Drain Flow Bypassing Biocell
May 2012	77%
July 2012	4%
December 2012	NA

#### LEGEND

- SAMPLE LOCATION

NOTE: LOCATIONS NOT SURVEYED



NOT TO SCALE

#### UNITED PARK CITY MINES

#### FIGURE 2 PROSPECTORS AREA 2012 DISSOLVED Cd AND Zn RESULTS

RESOURCE MANAGEMENT CONSULTANTS  
8138 SOUTH STATE ST.  
SUITE 2A  
MIDVALE, UT 84047  
801-255-2826



DECEMBER 2012

december 4 2012 watershed sample locations.docx

Table 1  
Silver Creek Middle Reach 2012 Water Quality Data

Sample ID	Location Description	Sample Date	Total Dissolved Solids (ppm)	As Total (ppm)	As Dissolved (ppm)	Cd Total (ppm)	Cd Dissolved (ppm)	Ca Total (ppm)	Mg Total (ppm)	K Total (ppm)	Na Total (ppm)	Pb Total (ppm)	Pb Dissolved (ppm)	Zn Total (ppm)	Zn Dissolved (ppm)	Bicarbonate (ppm CaCO3)	Carbonate (ppm CaCO3)	Cl (ppm)	Nitrate/Nitrite as N (ppm)	Sulfate (ppm)	Hardness (Calculated)	Notes
OU2/3-RFB-SW	Silver Creek U 248 culvert, downstream side of road.	4-Dec-12	1,060	0.00453	0.00233	0.00218	0.00127	155	38	2.35	105	0.0339	<0.002	0.728	0.635	163	<20	277	0.26	188	543	
		17-Jul-12	1,190	0.0184	0.0123	<0.000500	<0.000500	203	57.4	2.79	73	0.0261	<0.00200	0.159	0.111	159	<20.0	189	0.0725	464	743	
		15-May-12	NA	NA	NA	0.00212	0.000804	NA	NA	NA	NA	NA	NA	0.436	0.377	NA	NA	NA	NA	NA	NA	
OU1-MF-SW	Richardson Flat Embankment Wetland, Main Flow from OU1.	4-Dec-12	1,640	0.0032	0.00208	<0.0005	<0.0005	324	78.8	3.34	101	<0.002	<0.002	0.0786	0.0626	222	<20	323	<0.01	835	1,125	
		17-Jul-12	1,720	0.00531	0.00401	<0.000500	<0.000500	296	85.1	3.31	101	<0.00200	<0.00200	0.00588	<0.00500	142	<20.0	286	0.0104	763	1,089	
		15-May-12	NA	NA	NA	<0.000180	<0.000180	NA	NA	NA	NA	NA	NA	0.0153	<0.00500	NA	NA	NA	NA	NA	NA	
OU1-Hwy Pond-SW	Flow from pond in NE corner of Richardson Flat Embankment Wetland	4-Dec-12	1,840	0.00367	0.00273	<0.0005	<0.0005	272	74.2	7.87	201	<0.002	<0.002	0.0063	0.00965	127	<20	609	<0.01	491	984	
		17-Jul-12	2,070	0.00957	0.00639	0.000153	<0.000500	304	80.8	10.8	253	0.0021	<0.00200	0.0094	0.00672	108	<20.0	651	0.0166	502	1,091	
OU3-RFR-SW	Silver Creek at downstream side of Richardson Flat County Road below Pace Homer confluence.	4-Dec-12	836	0.00443	0.00224	0.00105	<0.0005	126	32.9	2.13	111	0.0185	<0.002	0.495	0.412	159	<10	284	0.406	224	450	
		17-Jul-12	956	0.00629	0.00371	0.00086	0.000608	140	42.8	2.71	125	0.0064	<0.00200	0.505	0.437	203	<20.0	262	0.0115	235	525	
		15-May-12	NA	NA	NA	0.00177	0.000235	NA	NA	NA	NA	NA	NA	0.342	0.216	NA	NA	NA	NA	NA	NA	
OU3-S0RFR-SW	Duplicate of OU3-RFR-SW on 15-May-12	15-May-12	NA	NA	NA	0.00163	0.000223	NA	NA	NA	NA	NA	NA	0.318	0.249	NA	NA	NA	NA	NA	NA	
	RPD (%)					8.2	5.2							7.3	14.2							
OU3-SFB-SW	Silver Creek, below upstream Rail Trail foot bridge.	4-Dec-12	868	0.00487	0.00384	0.000945	<0.0005	130	35.7	0.93	97.5	0.0182	<0.002	0.293	0.226	174	<20	233	0.58	224	471	
		15-May-12	NA	NA	NA	0.00186	<0.000180	NA	NA	NA	NA	NA	NA	0.281	0.158	NA	NA	NA	NA	NA	NA	

Table 1

## Silver Creek Middle Reach 2012 Water Quality Data

Sample ID	Location Description	Sample Date	Total Dissolved Solids (ppm)	As Total (ppm)	As Dissolved (ppm)	Cd Total (ppm)	Cd Dissolved (ppm)	Ca Total (ppm)	Mg Total (ppm)	K Total (ppm)	Na Total (ppm)	Pb Total (ppm)	Pb Dissolved (ppm)	Zn Total (ppm)	Zn Dissolved (ppm)	Bicarbonate (ppm CaCO <sub>3</sub> )	Carbonate (ppm CaCO <sub>3</sub> )	Cl (ppm)	Nitrate/Nitrite as N (ppm)	Sulfate (ppm)	Hardness (Calculated)	Notes
OU3-AFB Opp-SW	Silver Creek approx. 100 yards upstream of upstream Rail trail foot bridge	4-Dec-12	1,050	0.00432	0.0026	0.00132	<0.0005	112	26.7	2.35	186	0.0111	<0.002	0.73	0.85	141	<10	367	0.352	156	389	Collected upstream of significant inflow from Pace Homer ditch. Inflow from Pace Homer ditch accounted for ~75% of total Silver Creek flow at south Rail Trail foot bridge and below
OU3-BWeir-SW	Silver Creek approx. 150 yards downstream of Silver Creek weir	4-Dec-12	4,040	0.00229	<0.002	0.0137	0.00138	183	28.5	6.69	1200	0.0086	<0.002	2.42	2.02	106	<10	1940	0.667	260	574	
Pro-WL Pipe-SW	Effluent from Prospector bio-cell	4-Dec-12	1,710	<0.002	<0.002	<0.0005	<0.0005	297	34.8	5.77	205	<0.002	<0.002	0.862	0.0236	239	<10	480	0.0144	462	885	
		17-Jul-12	1,920	0.00114	<0.00200	0.000569	<0.000500	322	38.5	8.24	238	<0.00200	<0.00200	1.35	0.014	211	<20.0	510	0.0584	588	963	
PRO-Weir-SW	Weir in Silver Creek at Prospector.	4-Dec-12	4,070	0.00353	0.00223	0.00565	0.00243	109	20.8	5.8	1460	0.008	<0.002	0.627	0.573	101	<10	2030	0.243	115	358	
		15-May-12	NA	NA	NA	0.0028	0.000357	NA	NA	NA	NA	NA	NA	0.237	0.0783	NA	NA	NA	NA	NA	NA	
PRO-SWWeir-SW	Duplicate of PRO-Weir-SW on 4-Dec-12	4-Dec-12	4,020	0.00367	0.0021	0.00572	0.00231	108	19.9	5.99	1420	0.0082	<0.002	0.627	0.587	99.3	<10	2110	0.258	115	352	
	RPD (%)		1.2	3.9	6.0	1.2	5.1	0.9	4.4	3.2	2.8	8.4	0.0	0.0	2.4	1.7	0.0	3.9	6.4	0.0	1.7	
PHAP-SW	Pace Homer ditch above Hwy 248 culvert at Prospector	4-Dec-12	740	0.00455	0.0035	<0.0005	<0.0005	125	36.3	1.87	44.9	0.0066	<0.002	0.0503	0.0487	180	<10	106	0.82	192	461	

Note: Values in bold exceed Silver Creek TMDL limits